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Abstract book

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BRITISH ASSOCIATION OF HEAD & NECK ONCOLOGISTS

Table of Contents

Oral

Poster

Oral

ACTivity as medicine In Oncology for Head and Neck (ACTIOHN): Recruitment, retention, and other preliminary outcomes. A Feasibility Study

Oral

Mrs. Ruth Price [1], ***Ms. Debra Fisher*** [2], ***Dr. Andrew Levy*** [3], ***Prof. Andrew Schache*** [1], ***Dr. Rachel Brooker*** [4], ***Dr. Gemma Cherry*** [2], ***Mr. Michael Nugent*** [5], ***Prof. Simon Rogers*** [6], ***Dr. Steven Lane*** [2], ***Mrs. Valerie Bryant*** [7], ***Prof. Adrian Midgley*** [3], ***Prof. Jo Patterson*** [8]

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Aim

Physical exercise is a safe, cost-efficient, and effective intervention for cancer survivors. Regular exercise can reduce symptoms such as cancer-related fatigue, depression, prevent and reduce co-morbidities, attenuate toxicity related to cancer treatment, and reduce cancer-specific and all-cause mortality [1-4]. Exercise is generally recommended for all cancer survivors and should be started as early as possible [5]. However, there is limited evidence in head and neck cancer (HNC) [6], which has multiple challenges; patients typically present with substantial weight loss, inactivity, and low cardiorespiratory fitness; treatments are gruelling with substantial short and long-term symptom burden. Many live in areas of high deprivation, residing some distance from their treating centre and have low levels of health literacy; integrating interventions to this complex care pathway is challenging [7-13] .

Objective: To investigate the recruitment and retention following a remotely delivered, personalised, collaborative, and flexible exercise programme into the HNC care pathway.

Method

This prospective single arm feasibility and acceptability study aimed to recruit seventy HNC patients from two UK Centres, over 12 months. The intervention was a personalised, collaborative and flexible 8-week exercise programme delivered remotely by cancer exercise specialists, trained in behaviour change techniques (see Figure 1). Patients were invited to participate any time between diagnosis and 8 weeks post-treatment, according to their preference. Intervention content was based on patient needs, preferences, and goals, guided by physical activity cancer guidelines. Primary outcomes included recruitment and retention.

Results

118 patients were eligible for the study, 107 patients were approached, 76 consented (71%). 20% declined to participate, their reasons were too much to think about, additional paperwork, uninterested in exercise.

Participants M:F ratio 3:1; mean age 60.5 years (range 34-80). The majority had oropharyngeal (54%) or oral cancer (33%), 56% had T1/2 tumours. Fifteen patients (19%) consumed more than the recommended alcohol intake, 8 (10.5%) were current smokers. All but 1 of the patients agreed to participate on the first approach, with 45% consenting to ACTIOHN pre-treatment. Treatment included surgery alone (24%), surgery and adjuvant (chemo)radiotherapy (59%), or primary (chemo)radiotherapy (14.5 %). Seven consented but did not start the intervention. Of the 69 patients who started the intervention 29 (42%) dropped-out. The reasons were medical complications (n=12), unknown (n=10), poor engagement (n=4), mental health (n=2)

Preliminary data also shows improvement in some of the physical outcome measures.

Conclusion

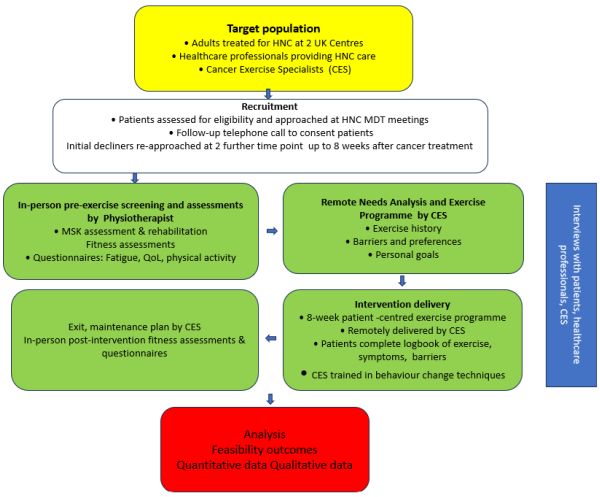
This novel study had a high recruitment rate indicating that HNC patients were interested in participating in an exercise intervention.

The outcomes in terms of recruitment, retention and patient/disease profile will be presented in full. Of particular note are the variations from the expected patient population (i.e. the number of patients who currently smoke was low), and the perceived impact of multimodality treatment on the capability of patients to complete the programme. ACTIOHN requires refinement to facilitate retention and further investigation to test effectiveness.

Key words: Physical exercise; cancer; feasibility; rehabilitation

Reference (if applicable)

References will be included in the presentation.



Picture1.png

An overview of the concept of Training Interface Group Felllowships in Surgical H&N Oncology - transition to Post CCT status

Oral

Mr. Austen SMITH [1]

1. Consultant OMFS / H&N Surgeon Sheffield and Barnsley- Past Chair Haed & Neck Surgical Oncology Training Interface Fellowships Committee JCST

Aim

The outgoing Chair of the Head & Neck Surgical Oncology Fellowship Training Committee (TIG Fellowships - JCST) presents a review of the history , development, performance and recent transition of TIG Fellowships from an in-training entity (pre- CCT) to a post accreditation stage of careers in Head & Neck Oncology.

Method

Presentation of changes / refinements , curricular upgrading and historical reviews of output and achievements of past H&N TIG Fellows (2019 survey Watters, G) and a new review currently being pursued to evaluate the first cohort of Post CCT Fellows completing in summer/ autumn 2023 forms the basis for an overview of the Fellowships in their new Post CCT format.

Results

High recorded appreciation for the value of TIG Fellowship Training, continued involvement in H&N services , significant leadership and good scientific productivity is evident from the 2019 review of all past H&N TIG Fellows. This is offset by a tendency for major UK H&N centres to detach or not be involved in hosting TIG Fellows in H&N.

Figures from the historical review support this - results from survey of the recent first post-CCT group of Fellows are pending.

Reasons variously cited are

-lack of control of the quality of applicants allocated ,-

- incomplete preparation of some candidates for extended / advanced Training , and

- competing attractions of hosting overseas (often self funded) Fellows) or non-TIGF / JCST Fellows.

This means the flow of core surgeons to supply surgical services to Head & Neck MDTs is not consistent and may not meet demand . Change is necessary.

Conclusion

The Training Interface Group (JCST) Fellowships in Head & Neck Surgical Oncology have a good track record in training surgeons from the 3 parent Specialties - ENT, Plastic Surgery and Oral & Maxillofacial Surgery - to good effect with easy Consultant appointment , good loyalty to and engagement in H&N , Productivity in research and progression to leadership in H&N.

The GMC required change to post -CCT recruitment , a comprehensively rewritten syllabus, and new priorities in recruitment at individual and Hosting Unit give hope for the future , to fulfil the aim of ongoing production of highly trained expert Head & Neck Surgeons for MDTs in the United Kingdom.

Reference (if applicable)

Watters, G A survey of past H&N TIG Fellows performance (JCST document) 2019

Head & Neck Surgical Oncology TIG Fellowships (JCST website)

Analysing the MD Anderson Dysphagia inventory

Oral

Dr. Kate Toft [1], ***Dr. Catherine Best*** [2], ***Prof. Jayne Donaldson*** [2]

1. *NHS Lothian,* ***2.*** *University of Stirling*

Aim

Dysphagia is a highly prevalent symptom of head and neck cancer (HNC) and has a marked impact on patients' quality of life (QoL). Measurement of dysphagia related QoL through patient reported outcome measures (PROMs) is a key part of HNC clinical and research practice. Currently the only tool that caters to this need is the MD Anderson Dysphagia Inventory (MDADI) (Chen et al., 2001).

This study analysed the MDADI qualitatively and quantitatively to generate novel data on its strengths and weaknesses and to suggest directions for future development of this widely used tool.

Method

Qualitative data from a convenience sample of 31 UK Speech & Language Therapists (SLTs) were gathered via an online survey circulated in 2021, focussing on content validity and clinical utility of the MDADI, and analysed using Reflexive Thematic Analysis. Content validity was considered in terms of domains of relevance, comprehensiveness and comprehensibility delineated by the COSMIN group (Terwee etal 2018). Item Response Theory (IRT) was used to quantitatively analyse MDADI data collected between 2016-2021 from 302 patients with HNC treated in NHS Lothian. Structural validity, internal consistency and the presence of Differential Item Functioning (DIF) in specific tool items were analysed. DIF concerns whether patients with the same level of dysphagia related QoL respond differently to specific items due to the influence of other variables, such as age or socioeconomic status. IRT analysis was also employed to produce suggestions for an item-reduced shortform of the MDADI.

Results

Content validity of the tool was rated as inconsistent or insufficient across all three COSMIN domains. Clinical utility of the MDADI was also highlighted as problematic across multiple criteria.

Quantitative analysis of structural validity and internal consistency showed these properties to be acceptable, however DIF was confirmed for the variables of age, sex and socioeconomic status for several items in the tool. An IRT-based analysis looking at potential item reduction of the MDADI produced different results for pre- and post-treatment datapoints, and also compared with previously published studies.

Conclusion

The MDADI is unique in its HNC-specific focus on dysphagia-related QoL assessment and is extremely widely used in both HNC research and clinical practice. However, no previous research has explored its content validity, clinical utility or the presence of DIF within tool items. The issues with the tool highlighted by this study suggest there is a pressing need for further reanalysis and potentially amendment of the MDADI, or development of a new tool that could take its place.

Reference (if applicable)

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Qual Life Res. 2018 May;27(5):1159-1170. doi: 10.1007/s11136-018-1829-0. Epub 2018 Mar 17. PMID: 29550964; PMCID: PMC5891557.

Aspiration rates and clinician-graded dysphagia after transoral surgery (TOS): a sub-group analysis of videofluoroscopy swallow studies from the PATHOS trial (on behalf of PATHOS Trial Group)

Oral

Prof. Jo Patterson [1], ***Prof. Kate Hutcheson**** [2], ***Prof. Chris Hurt*** [3], ***Dr. Carly Barbon*** [2], ***Ms. Laura-Jayne Watson*** [4], ***Ms. Deanthea Valencia*** [2], ***Ms. Clare Alvarez*** [2], ***Ms. Christie Heiberg*** [5], ***Ms. Joanna Canham*** [5], ***Prof. Terry Jones**** [1], ***Prof. Mererid Evans**** [6]

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Aim

PATHOS[1] is an ongoing Phase II/III randomised trial examining risk-stratified de-escalated adjuvant therapy after transoral surgery (TOS) for human papillomavirus associated oropharyngeal cancer (see figure 1). While the goal of TOS is functional preservation, acute postsurgical dysphagia is expected. The E3311 trial[2], a USA study, comparing reduced or standard-dose post-TOS radiotherapy, recently reported an aspiration prevalence (prior to adjuvant treatment), observed on videofluoroscopy swallow studies (VFSS) of 13%. Our objective was to assess swallowing efficiency in addition to safety, captured on VFSS in PATHOS trial participants before and after TOS, prior to randomisation for adjuvant therapy.

Method

This is a sub-group analysis of the PATHOS trial. Standardised VFSS were conducted and centrally graded (blind to timepoint) using the Penetration-Aspiration Scale (PAS)[3] and Dynamic Imaging Grade of Swallowing Toxicity (DIGEST)[4]. The DIGEST scale provides both a swallowing safety and efficiency profile, graded from zero (no dysphagia) to four (life-threatening dysphagia). Aspiration rates (per maximum PAS ≥6), any grade dysphagia (per DIGEST grade >0) and high-grade dysphagia (per DIGEST grade >1) were compared at baseline to 4 weeks post-TOS in all patients using McNemar's test.

Results

One hundred and four patients who underwent TOS between November 2015 and July 2023 in 19 UK centres and had both pre- and post-TOS VFSS graded at the time of analysis. There was no aspiration at baseline; aspiration increased to 9/104 (8.7%) after TOS ($p = 0.003$). Swallowing impairment was more prevalent using the DIGEST grade that accounts for both penetration/aspiration as well as residue as a marker of swallowing efficiency. Per DIGEST, any grade baseline dysphagia (DIGEST grade ≥0) was prevalent in 32/104 (30.8%) of VFSS increasing to 63/104 (60.6%) after TOS ($p < 0.001$), and high-grade dysphagia (DIGEST grade >1) was prevalent in 1/104 (1.0%) of VFSS at baseline increasing to 15/104 (14.4%) after TOS ($p <0.001$).

Conclusion

No aspiration was noted pre-TOS. Aspiration rates significantly increased to ~9% after TOS (before adjuvant therapy) in similar magnitude to rates observed in E3311. Swallowing inefficiency was more common than aspiration at both timepoints. Preliminary results suggest that DIGEST grading may be more sensitive to detect changes on VFSS that reflect potentially important functional changes beyond aspiration.

Patients at risk of developing medical complications from 1) aspiration e.g. those in poor pulmonary health and 2) those with substantial swallowing inefficiency compromising nutritional intake require close follow up, particularly during adjuvant treatment.

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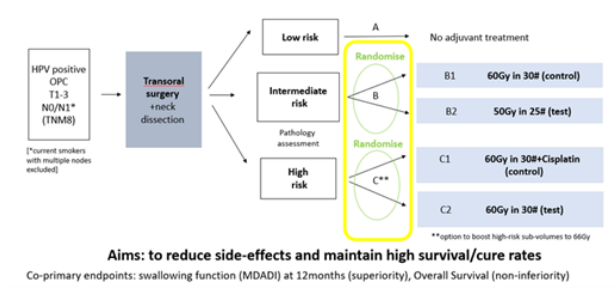

Pathos.trial.schema.png

Cancer-related pain in head and neck cancer survivors: longitudinal findings from the Head and Neck 5000 clinical cohort

Oral

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Aim

Head and neck cancer (HNC) ranks as the sixth most prevalent global cancer. Pain is the most common symptom that leads to its diagnosis and affects a big proportion of HNC patients before treatment. (1)
In those with HNC, pain leads to decreased QoL, impairs interpersonal relations, and has an impact on prognosis. (2) It has been difficult to assert the relationship between HNC and pain with certainty due to a range of factors, such as small sample sizes and disparities in study design as well as pain measurements.
Using data from the Head and Neck 5000 cohort, we investigated clinically significant pain over a year post-diagnosis. We assessed: (1) Temporal trends; (2) Compared pain across HNC treatments, stages, sites, and by HPV status; and (3) Identified subgroups of patients at risk of experiencing more pain.

Method

Recruitment of HNC patients (N=5,404) was undertaken in 2011-2014 and included individuals aged 16 and older with new primary or suspected HNC.

The study focused on two outcome variables: clinically important general pain (defined as ≥25 (3) on the EORTC-QLQ-C30) and HNC-specific pain (EORTC-QLQ-H&N35).

Medical records provided data on demographics, tumour characteristics, HPV status, treatment, and recurrence. The Adult Comorbidity Evaluation (ACE□27) evaluated comorbidity, and deprivation categories were assigned based on home addresses. Depression was identified with a Hospital Anxiety & Depression Scale (HADS) score ≥8. (4)
The analysis included individuals who had been diagnosed with cancers of the thyroid, salivary gland, hypopharynx, oropharynx, larynx, and/or oral cavity, undergone treatment, and were free of recurrence during follow-up (N = 2870).

Using mixed effects multivariable regression, we investigated time trends and identified associations between (i) clinically-important general pain and (ii) HN-specific pain and clinical, socio-economic, and demographic variables.

Results

The study included 2870 patients in the analysis. At baseline, 40.9% had clinically-important general pain, rising to 47.6% at 4-months and declining to 35.5% at 12- months. HN-specific pain followed a similar pattern (mean score (sd): baseline 26.4 (25.10); 4-months. 28.9 (26.55); 12-months, 17.2 (19.83)).

After adjusting for time-point in the multivariable model, the odds of clinically important general pain over 12 months were increased in: younger people (<65), those who had depression at baseline, current smokers, those living in more deprived neighbourhoods, those with higher stages of disease (stages 2/3/4), those with comorbidities, those with cancers of the oral cavity and HPV negative cancers.

HN-specific pain scores followed a similar pattern, and HN-specific pain was increased in younger people (<65), current smokers, those with depression at baseline, multiple comorbidities, and oral cavity cancers, those who underwent multimodal treatment, and people with HPV negative cancers.

Conclusion

These findings show that a significant proportion of HNC patients suffer from pain at diagnosis and after treatment; it seems likely that this, in turn, has a substantial impact on QoL.

The high burden of pain in HNC patients with depression is concerning, and clinical teams should put a greater emphasis on diagnosis and treatment of depression in this population. Screening questionnaires for depression, such as the HADS, could be used and HNC multi-disciplinary teams could be expended to include clinical psychologists. Systematic pain screening could also help to identify those who could benefit from a pain management plan at an earlier stage.

Larger scale randomised studies of interventions to encourage and support HNC survivors are warranted to explore the potential improvements in QoL and pain in this patient group.

Reference (if applicable)

1 Macfarlane TV, Wirth T, Ranasinghe S, Ah-See KW, Renny N, Hurman D. Head and neck cancer pain: systematic review of prevalence and associated factors. *J Oral Maxillofac Res*. 2012;3(1):e1.

2 Fagan JJ, Noronha V, Graboyes EM. Making the Best of Limited Resources: Improving Outcomes in Head and Neck Cancer. *Am Soc Clin Oncol Educ Book*. 2021;41:1-11

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Clinical Profile and Referral Pathways in Late Radiation-Associated Dysphagia (Late-RAD): A Consecutive Case Series

Oral

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1. *The Newcastle Upon Tyne Hospitals NHS Foundation Trust,* ***2.*** *Northumbria University,* ***3.*** *University of Liverpool*

Aim

To report the referral pathways to specialist speech and language therapy (SLT) services for patients with late-RAD and to describe their swallowing profile and management.

Method

The medical notes of patients referred to the SLT department with late-RAD were retrospectively reviewed. The department is part of a large tertiary HNC unit in the north-east of England.

Demographic information was collected for: age, gender, tumour site and stage, treatment modality and time (in months) since completion. Symptoms relating to late-RAD were described as present or not and swallowing-related interventions were recorded as either conducted or not. Descriptive statistics were used to report findings.

Swallow function was measured using the Functional Oral Intake Scale (FOIS) and scores taken as 'best' recorded post-treatment and again at presentation with late-RAD. Penetration-Aspiration Score (PAS) were taken from instrumental assessments conducted at presentation with late-RAD.

For patients discharged from cancer surveillance follow-up, timing and referral route back into the tertiary system was noted.

Results

A total of 54 patients were included. Three died after the period of data collection. Fifty per cent were treated for oropharyngeal (OPC) disease. Primary treatment was non-surgical in 74% (n=40), Median time since completion of treatment was 152.5 months (53-624m).

Swallowing function post-treatment had returned to normal or near normal in most as described by 81% scoring a FOIS >6. Following the onset of late-RAD this number reduced to 11%. Number of patients being completely gastrostomy-fed increased from 1 to 15. 74% scored PAS >7 indicating aspiration.

Ten patients underwent functional laryngectomy and of these, 9 remained gastrostomy dependent and surgical voice restoration was successful in 3.

More than half (57%) required hospitalisation for symptoms related to late-RAD (planned and acute). Of those discharged from ongoing surveillance (16/54), 24% accessed specialist services following acute admission related to late-RAD symptoms.

Conclusion

Late-RAD can significantly affect swallowing function with high rates of aspiration and dependency on enteral feeding. Current pathways do not facilitate timely intervention with some patients presenting acutely and requiring hospital admission. Earlier referral to specialist services could prevent these admissions and enable improved support to patients and carers.

Criteria for the diagnosis of extranodal extension detected on radiological imaging in head and neck cancer: HNCIG international consensus recommendations

Oral

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Aim

Extranodal extension of tumour on histopathology (pENE) is a known negative prognostic indicator in head and neck cancer (HNC). Evidence indicates that ENE detected on imaging (iENE) similarly correlates with poorer outcomes. Moreover, if iENE can be accurately detected prior to the initiation of treatment, it could inform the choice of therapy. Specifically, patients with iENE might benefit more from non-surgical treatments, thereby avoiding the adverse effects associated with trimodality therapy. However, standard diagnostic criteria and terminology for reporting iENE lack consensus. The main aim of this work is to produce international consensus recommendations on the terminology and diagnostic criteria for iENE to harmonize clinical practice and research.

Method

All 21 international member groups of the Head and Neck Cancer International Group (HNCIG) were invited to nominate a practicing radiologist with HNC expertise to join an international consensus panel. A five-round modified Delphi process with 18 international radiology experts representing 14 national clinical research groups was completed. Online questionnaires via the Qualtrics platform included four main sections pertaining to iENE: diagnostic criteria, inter-observer agreement, the impact of core biopsy, and classification systems. An overview of the modified Delphi process is shown in **Figure 1.**

Results

We generated consensus recommendations on the terminology and diagnostic criteria for iENE in HNC, aiming to harmonise clinical practice and research. Consensus was reached on 47 items. Notably, experts agreed unanimously that iENE characteristics are consistent between HPV-positive and HPV-negative HNC. For identifying iENE, the panel recommended criteria such as indistinct nodal margins, perinodal fat extension, invasion into adjacent structures, and presence of conglomerate/matted/coalescent nodes, while excluding nodal necrosis and capsular thickening features. It was also agreed that the terms "conglomerate", "matted", and "coalescent" do

not describe different features. Crucially, we introduced a novel 5-tier classification system for iENE diagnosis, gaining majority support over existing models, although it awaits clinical validation. The experts strongly advocated for the adoption of a standardised classification system and synoptic reporting for iENE. These guidelines have received endorsements from 19 national organizations across 34 countries, marking a significant step in harmonising iENE assessment in HNC.

Conclusion

These guidelines are aimed to establish uniform definitions and classifications, thereby enhancing the consistency and clarity in reporting for clinical practice and research in the field. In addition to standardising existing practices, and based on the findings of this Delphi process, we have introduced a novel classification system specifically tailored for the diagnosis of iENE in HNC. This new system is a pivotal step towards refining diagnostic accuracy. Once validated, this novel classification system holds the potential for broader implementation in clinical settings, offering a more structured approach to diagnosing iENE.

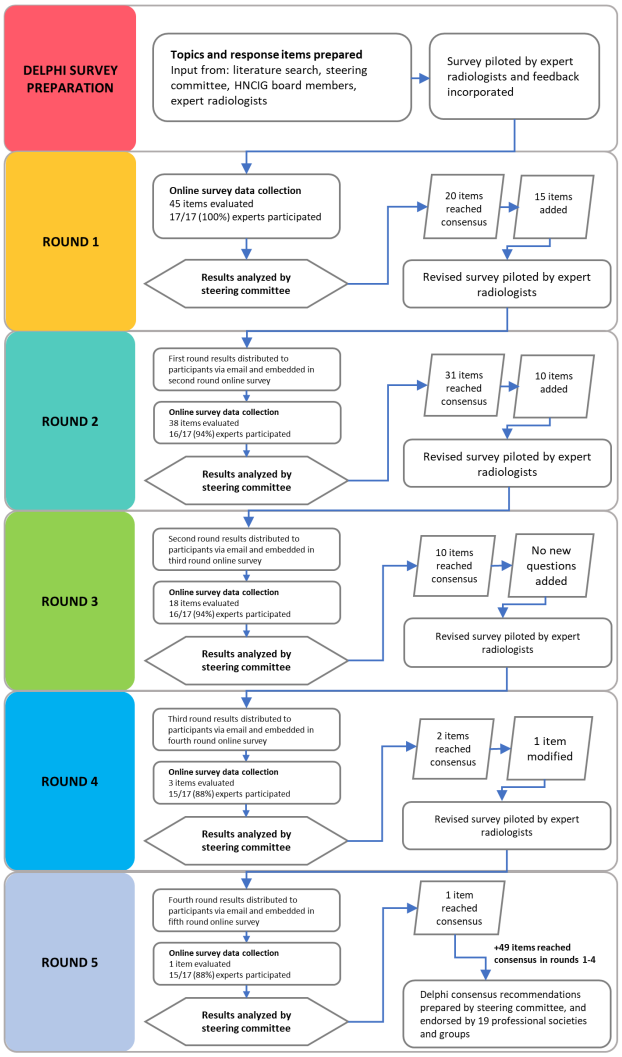

Figure 1.png

Improving Head and Neck Cancers outcomes in multicultural Leicester: a co-produced awareness campaign with ethnic minority communities

Oral

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Aim

Leicester is the most multicultural city in the United Kingdom with a high level of socio-economic deprivation and diversity. Patients diagnosed with Head and Neck Cancers (HNCs) who come from deprived Black, Asian and minority communities report worse survival rates compared with White British groups. Reasons include barriers to care, late presentation, cultural misgivings about cancer diagnoses, genetic predisposition to more aggressive disease, risk factor exposures to tobacco chewing, lack of confidence navigating the health service and barriers to accessing care. Health inequalities have exacerbated in these communities during COVID-19 pandemic, with patients presenting late with advanced HNCs[1]. It is crucial to focus on early prevention and raising public awareness of HNC symptoms, risk factors, and supporting communities to seek help promptly.
Our aim was to utilise a community-based participatory approach to reduce HNCs inequalities among minority ethnic groups through co-production of effective awareness-raising methods that translate to behavioural change.

Method

Utilizing a 'bottom up' approach, this three-stage project proposed Public and Patient Involvement (PPI) groups with local, national patients and members of minority communities to gain insight into their perspectives about HNCs and how earlier diagnosis can be facilitated. We ensured it was their knowledge and lived experiences that drive, shape and influence recommendations for practice[2].
Over a period of 6 months, we conducted 16 participatory focus groups of two hours each with seven different ethnic communities from socio-economically deprived areas within Leicester. These included 53 members of Black, Punjabi, Indian, Pakistani, Bangladeshi, Eastern European and White British communities. We utilized co-designed open-ended questions and visual materials, and group discussions were co-facilitated by a PPI Lead, a representative of each community organisation and a member of the research team. Written notes were taken during these PPI meetings. Discussions were audio taped to ensure accurate record and notes of discussions.

Results

The findings informed health literacy of these ethnic communities including (1) their knowledge and understanding of HNCs and risk factors; (2) their confidence to use health information; (3) potential barriers to engaging with services; (4) their experience of health systems and (5) information needs for a co-produced awareness campaign.
Overall, there was a lack of knowledge and understanding of HNCs symptoms. Risk factors such as chewing of paan, tobacco and areca nut, were often associated with cultural traditions, *generational initiation* and social identity. Younger generations are using tobacco via vaping more.
Communities trusted their GPs but most expressed some frustration with access especially post-pandemic. Some groups preferred their *collective wisdom* and try home remedies first. There was strong reliance on community

pharmacists and sometimes presented to their dentists but had challenges with access and cost. Due to social isolation and stigma, people with cancer symptoms may not seek help early.

Conclusion

Co-production of HNC awareness campaign that incorporates both print media and videos for circulation on social media were jointly proposed. Communities suggested videos, drama pieces, positive story-telling from survivors of cancers in their communities and provision of relevant leaflets mainly in English, and other languages to a lesser degree.

There was an emphasized need to develop transparent partnerships between researchers and communities. These were perceived as key to developing impact in communities, by organising appropriate events at the local temples, adult day care centres, and community centres.

Our community-based engagement approach enabled the research team and community organisations to engage meaningfully in understanding the symptoms and risk factors for HNCs. Socio-cultural perceptions, lack of awareness and trust in the healthcare services delayed access to professional help. They have committed to co-producing an awareness campaign for HNCs both locally and nationally, to improve the outcomes for HNCs in ethnic minority groups.

Reference (if applicable)

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Incidence trends in head and neck cancer subsites: a national population-based study (2001-2020)

Oral

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Aim

Head and neck cancer (HNC) is the eighth most common cancer in the UK. It encompasses laryngeal, oropharyngeal, and oral cavity cancers. The aim of this descriptive epidemiological study is to examine trends and socioeconomic determinants among anatomical divisions of laryngeal, oropharyngeal, and oral cavity cancers over the past two decades.

Method

Data on newly diagnosed HNC patients in Scotland from 2001 to 2020 was collected from the Scottish Cancer Registry, including patient demographics and crude counts for each tumour subsite as well as population denominators. Joinpoint regression analysis and Poisson regression analysis were performed to identify the trends in incidence rates.

Results

Overall, HNC incidence rates have remained stable over the past two decades with an average annual percentage change (AAPC) of 0.004% (p=0.99), but subsite-specific trends were observed. Oropharyngeal cancer showed a significant increase in incidence rates with an AAPC of 3.79% (p=0.01). Among oropharyngeal subsites, the tonsils (C09) and the base of the tongue (C01) experienced the greatest increases in AAPC of 3.79% and 4.94%, respectively. Conversely, laryngeal cancer rates declined significantly with an AAPC of -2.62% (p=0.02). The glottis (C32.0) and larynx not otherwise specified (NOS) (C32.9) exhibited the most substantial reductions, with an AAPC of -2.91% (p = 0.29) and -9.00% (p = 0.04), respectively. Incidence rates for oral cavity cancer and its anatomical divisions remained mostly stable, with an AAPC of -0.74% (p = 0.26).

Conclusion

This analysis highlights that behind a stable HNC incidence rate over the past 20 years, there are differential trends among various anatomical divisions with an overall increasing burden of oropharyngeal cancer and declining rates of laryngeal cancer.

Long-term fatigue in oropharyngeal cancer survivors post (chemo)radiotherapy: the ROC-oN Study

Oral

Dr. Zsuzsanna Iyizoba [1], ***Dr. Emma Nicklin*** [2], ***Dr. James Price*** [3], ***Mr. Jack Baldwin*** [1], ***Dr. Robin Prestwich*** [1], ***Prof. Sarah Brown*** [4], ***Prof. Emma Hall*** [5], ***Dr. John Lilley*** [1], ***Dr. Matthew Lowe*** [3], ***Prof. David Thomson*** [3], ***Dr. Florien Boele*** [2], ***Dr. Louise Murray*** [1]

1. *Leeds Teaching Hospitals NHS Trust,* ***2.*** *Leeds Institute of Medical Research, University of Leeds, Leeds, UK,* ***3.*** *The Christie NHS Foundation Trust,* ***4.*** *Leeds Cancer Research UK Clinical Trials Unit, Leeds Institute of Clinical Trials Research,* ***5.*** *The Institute of Cancer Research, London*

Aim

Non-surgical treatment with (chemo)radiotherapy is a standard of care for patients with oropharyngeal cancer and late toxicity is a major survivorship issue. Fatigue is a common and debilitating factor for many cancer survivors. Little data is available to understand the prevalence and severity of fatigue in oropharyngeal cancer survivors (OPCSs).

Method

The ROC-oN (Radiotherapy for Oropharyngeal Cancer and impact on Neurocognition) study ; a mixed method cross sectional multicentre study evaluating fatigue and neurocognitive function in patients following RT +/- chemotherapy for OPC was conducted. Data was collected by means of a mailed-out survey. One of the main outcome measures was self-reported fatigue based on the multidimensional fatigue inventory (MFI). Predictive factors of overall fatigue score and fatigue dimensions were investigated by multiple linear regression analyses. Associations between fatigue, QoL using the EQ-5D-5L questionnaire (measures EQ visual analogue [VAS]score and assess the 5D- descriptors), work as measured by the Work Productivity and Activity Impairment (WPAI) questionnaire and mood disturbance reported on the Profile of Mood Scale (POMS) were explored.

Results

In 349 OPCSs with median follow-up of 6years, severe fatigue was reported in 30.29%, moderate fatigue 31.47% and mild 38.24% as defined by total MFI score of >60.5, >43.5<60.5 and <43.5 respectively. Age(>60yrs), number of co-morbidities and soft palate subsite were predictors of fatigue (p=0.007, <0.0001 and 0.001). Fatigue was associated with worse QoL: VAS declined with increasing- fatigue (mild fatigue: mean VAS 86.74, moderate: VAS 74.31and severe: VAS 60.81, MANOVA p <0.0001) and a reduced proportion of survivors with fatigue indicated “perfect health” on the 5D descriptors (mild fatigue: 70.52% indicated perfect health, moderate: 25.26% and severe: 4.2%). Total work productivity impairment (TWPI) was associated with fatigue (mean TWPI 5.81%, 14.56% and 47.38% with mild, moderate, and severe fatigue, MANOVA p<0.0001), influenced mostly by physical fatigue. A significant moderate correlation was observed between mood disturbance and fatigue (r= 0.6457, p<0.0001), with mental fatigue potentially exerting the most impact.

Conclusion

Moderate or severe patient-reported fatigue is common in survivors of oropharyngeal cancer (OPCs) after definitive radiotherapy. Those experiencing fatigue reported lower quality of life, noted decreased work productivity and had poorer mood.

Longitudinal study of circulating tumour DNA in Head and Neck patients to aid decision making alongside post-treatment PET-CT

Oral

Ms. Summy Bola [1], ***Dr. Anthony Cutts*** [2], ***Dr. Dimitris Vavoulis*** [2], ***Mr. Manu Shrivastava*** [1], ***Dr. Ketan Shah*** [1], ***Prof. Anna Shuh*** [2], ***Prof. Stuart Winter*** [1], ***Prof. Jenny Taylor*** [2]

1. *Oxford University Hospitals NHS Foundation Trust,* ***2.*** *University of Oxford*

Aim

Head and neck squamous cell cancers (HNSCC) encompass a heterogenous group of tumours harbouring multiple clonal populations. Despite advances in treatment, the overall 5-year survival for HNSCC remains static at 66%[1] owing to the high rate of recurrence which often presents as advanced disease, limiting the possibility of salvage treatment. PET-CT is the gold-standard for assessing treatment response after chemoradiotherapy (CRT). Equivocal findings such as necrosis-related avidity are a well-recognised problem and can occur in up to 38% of post-treatment scans, delaying diagnosis or causing additional morbidity.[2,3]Circulating tumour DNA (ctDNA) and circulating oncogenic HPV variants have emerged as potential biomarkers to detect disease prior to clinical detection as part of a liquid biopsy. The aims of this study were to:

1. Establish if liquid biopsy can be used to aid decision-making after an equivocal PET-CT.
2. Investigate if liquid biopsy can detect recurrence or a second primary cancer after treatment.

Method

HNSCC patients (n=41) were split into two treatment arms; CRT versus surgery and observed for 5years. Tumour tissue and blood was taken pre-treatment and at 3-6 timepoints after treatment (blood only), including the time of the 12-week post-treatment PET-CT. These scans were assigned a Hopkins grade by an independent consultant radiologist to determine radiological equivalence alongside clinical course (Table 1). True disease status was determined retrospectively.

Next Generation Sequencing was performed using a panel targeting 17 commonly mutated genes in HNSCC. Libraries were sequenced on the Illumina MiSeq or NextSeq platforms. The presence of somatic mutations or HPV 16, 18, 31, 33, 35 was considered a positive liquid biopsy. Detection of low-level somatic variants was done using a custom bioinformatics pipeline utilising error-corrected deduplication. Whole genome sequencing (100X) was carried out on 12 patients to validate results and conduct comprehensive mutation profiling.

Results

In CRT patients, PET-CT was clinically clear for 11/27, equivocal in 13/27 and showed residual cancer in 3/27. The sensitivity and specificity of liquid biopsy in assessing disease status after CRT was 100% and 90% respectively(PPV=75%,NPV=100%). PET-CT sensivity and specificity was 67% and 43% respectively(PPV=25%,NPV 82%). One patient underwent an unnecessary neck dissection (false-positive scan) and 2 patients had undetected low-volume metastasis (false-negative scan). Accuracy of PET-CT increased by combining liquid biopsy outcome, where ctDNA determined disease status in the event of an equivocal PET (Figure 1).

The sensitivity and specificity of liquid biopsy in predicting treatment response in all patients (Surgery and CRT) was 87.5% and 88.8% respectively.

Disease-free survival at 5 years was 69%, with a significant survival benefit if liquid biopsy remained negative post-treatment ($p<0.001$). Longitudinal monitoring showed rising ctDNA concentrations preceded each recurrence/new primary. There were 2 liquid biopsy positive patients who remained clinically clear.

Conclusion

Predicting response after treatment has improved since the advent of PET-CT. Despite this, a proportion of patients have equivocal scans after treatment leading to delayed diagnosis or unnecessary interventions. This is not well reported in large meta-analysis describing sensitivity and specificity of PET-CT[5,6] but may account for the wide range of PPV reported in some studies.

Liquid biopsy was better than PET-CT at determining true disease status after CRT and has a potential role in decision-making after treatment. Liquid biopsy did not perform as well when including surgical patients which may be attributable to the high degree of genomic instability in HPV negative HNSCC and limitations of the panel.

Longitudinal biomarker surveillance showed concordance between rising mutations and disease. If utilised clinically, it may have prompted further investigations enabling earlier diagnosis of recurrence/second primary. Further work should aim to improve panel selection and investigate if earlier diagnosis impacts overall survival.

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Table 1: PET-CT Category according to Hopkins Grade and Clinical outcome

Category	Primary criteria	Additional criteria
Complete Response (CR)	Hopkins 1	Hopkins 2 or 3 with no further investigation. Patient enters surveillance after post-treatment PET
Equivocal Response (EQ)	Hopkins 3 with further investigation to confirm complete response Hopkins 4 with decision to continue monitoring due to good treatment response	Hopkins 2 with further investigations to determine disease status
Cancer (CA)	Hopkins 5	Hopkins 4 and treated as poor treatment response requiring intervention

Table 1.png

Figure 1: Performance metrics at Timepoint 3 (12 weeks after CRT end). Using ctDNA improves specificity, PPV and NPV of PET-CT

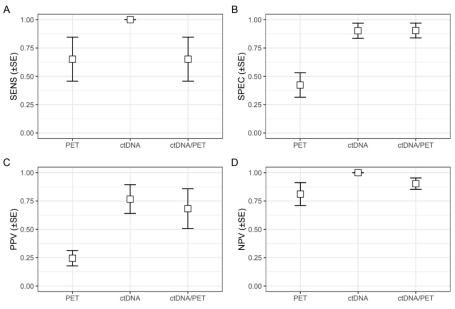

Figure 1.png

Management of patients with recurrent head and neck cancer treated by salvage surgical procedures: The International Centre for Recurrent Head and Neck Cancer (IReC) Delphi Consensus Project

Oral

Mr. Andrew Williamson [1], ***Mx. IReC Collaborators*** [1], ***Dr. Ben O'Leary*** [1], ***Prof. Vinidh Paleri*** [1]

1. *The Royal Marsden Hospital*

Aim

Despite advances in oncological treatments, head and neck squamous cell carcinoma has continues to have a high risk of recurrence (rHNSCC). Due to post-treatment factors reirradiation is often not possible, with salvage surgery typically being the only curative option for many patients. Unfortunately, the indications for salvage surgery can be highly variable between HNSCC centres.

Multidisciplinary teams (MDTs) deliver consensus opinions on cancer management using clinical evidence, patient wishes, and local expertise. MDTs may refer to national recommendations such as the 2016 UK rHNSCC guidelines. However, a recent review of rHNSCC guidelines demonstrated significant deficiencies in methodology. According to the AGREE-II protocol, guidelines had a low mean methodology score of 40.9%, with 4/5 receiving "low" quality ratings.

The aim of this project was to produce high quality, evidence-based consensus statements on the surgical management of rHNSCC using a multi-phase Delphi consensus technique, involving multidisciplinary experts from across the UK.

Method

The AGREE-II protocol was used to prepare a multi-stage Delphi consensus process. A literature review was conducted in MEDLINE of systematic reviews describing salvage surgery for rHNSCC published between 2003-2023. Targeted searches were conducted of landmark papers and international guidelines.

Draft consensus statements focusing on several topic areas were generated including: pre-operative management, salvage surgery of the larynx, hypopharynx, oral cavity, oropharynx, and cervical nodes, and post-operative rehabilitation. Statements were written according to NICE recommendations, and the quality of associated evidence was ranked by the Strength of Recommendations Taxonomy (SORT).

Multidisciplinary experts from IReC, ENTUK, BAHNO, and BAOMS were invited to participate in a Delphi consensus study hosted on Survey Monkey. Each round lasted two weeks with regular email reminders sent. At the end of each round, statements that reached pre-agreed thresholds were removed, whilst the remainder were edited and voting resumed for up to a maximum of three rounds.

Results

The literature search derived 20 best practice guidelines and consensus documents, in addition to 62 systematic reviews and 18 original research articles. 37 articles and guidelines were specific to recurrent HNSCC. The review produced evidence based statements across 4 key subjects: pre-operative management (10), laryngeal and hypopharyngeal salvage surgery (21), oral and oropharyngeal salvage surgery (23), and post-operative management (19).

The Delphi study was conducted over two 6-week phases. Thirty consultants were invited, including ENT (11), Oncology (8), OMFS (10), and SLT (1). The first phase (pre-operative management and laryngeal/ hypopharyngeal

salvage) consisted of 31 statements of which 15 achieved unanimous (100%), 9 very strong (90-99%), 6 strong (80-89%), and 1 majority (60-70%) agreement. The second phase (oral and oropharyngeal salvage and post-operative management), consisting of 42 statements, is currently undergoing Delphi voting and will be complete by March 2024.

Conclusion

In conclusion, the IReC consensus has delivered one of the largest guidelines on salvage surgery for rHNSCC to date. The project has produced definitive recommendations on a wide range of complex themes and surgical procedures in an uncommon and difficult-to-manage patient population who are subject to considerable variations in practice across HNSCC centres. Moreover, the statements are relevant to the wide scope of practice across the UK, in part due to excellent engagement from over 30 multidisciplinary experts representing numerous societies, specialties, and hospitals.

In the future, our team will assess adherence to the consensus' best practice recommendations through the prospective RESCUE (Clinicaltrials.gov NCT05808920) and IReC registry studies. Moreover, it is aimed that the IReC consensus will become an evolving process, with follow-up Delphi's facilitating a rapid consensus response to IReC's research and future landmark studies.

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Figure 1: Chart summarising the results from Phase 1 of the Delphi Consensus Process

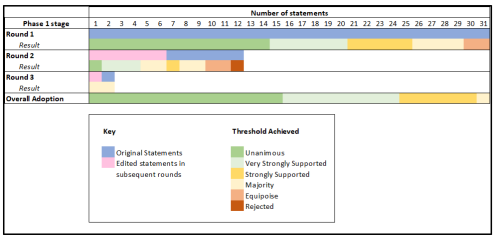
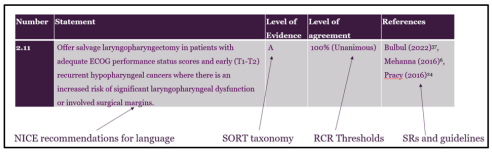


Figure 1.png

Figure 2:

Example statement utilising the NICE recommendations for language, SORT taxonomy, agreement thresholds, and relevant existing systematic reviews and guidelines.



Number	Statement	Level of Evidence	Level of agreement	References
2.11	Offer salvage laryngopharyngectomy in patients with adequate ECOG performance status scores and early (T1-T2) recurrent hypopharyngeal cancers where there is an increased risk of significant laryngopharyngeal dysfunction or involved surgical margins.	A	100% (Unanimous)	Bulbul (2022)[3], Mehanna (2016)[4], Pracy (2016)[24]

NICE recommendations for language | SORT taxonomy | RCR Thresholds | SRs and guidelines

Figure 2.png

Table 1:

Levels of agreement thresholds used in the consensus process, adapted from the Royal College of Radiologists consensus statements on Head and Neck Cancer[7].

Level of support	Threshold
Unanimous	100%
Very strongly supported	90-99%
Strongly supported	80-89%
Majority	60-79%
Equipoise	50-59%
Rejected	<50%

Table 1.png

North Central London Suspected Head & Neck Cancer Messaging Service Pilot

Oral

Mr. Andy Murphy [1], ***Ms. Denise Flynn*** [2], ***Dr. Ruheena Mendes*** [2], ***Mr. Nick Smith*** [3]

1. *North Central London Cancer Alliance,* ***2.*** *University College London Hospital,* ***3.*** *Consultant Connect*

Aim

The service aims to give an opportunity for GPs to discuss with the specialist H&N services patients who they are concerned may have a risk of a H&N cancer. The service aims through this interaction to provide GPs with guidance on patients who would benefit from a urgent suspected cancer referral and those who may be better supported on either a routine pathway or treated in primary care. Additionally for patients who have a high risk of cancer the H&N service can be expedited through the booking of diagnostic appointments in advance of a referral being formally received.

The service aims to support GPs in making clinical decisions, improve cancer pathways and performance and reduce unnecessary urgent suspected cancer referrals.

Method

Working in partnership with the Consultant Connect app the service adapted an already existing H&N risk triage tool into a messaging template for GPs in North Central London which provided all of the information to make an assessment. In addition the service crucially allowed GPs to send images and for the services to message back and forth for any additional information required. The service was manned weekdays 9-5 by the UCLH H&N CNS team who facilitated gathering of information from relevant colleagues in the department before replying the same day with guidance on appropriate referral routes or treatment options. Where patients were deemed higher risk of cancer the CNS would request the GP make the referral, ask for the interaction to be referenced in the letter and inform they have booked the patient for diagnostic tests as required.

Results

The pilot service ran between May 2023-December 2023 with 37 patients discussed. Of these patients 16 were recommended for urgent suspected cancer referrals of which 4 have been confirmed as cancers. This represents 43.2% of interactions resulted in expedited diagnostic pathways and 10.8% of patients then receiving a diagnosis of cancer. A further 11 (29.7%) of patients were referred into other appropriate routine pathways such as oral medicine. The final 10 interactions (27%) were provided Primary Care treatment advice or reassurance.

In addition to providing expedited pathways and avoiding referrals for those who need it the service provided opportunities for GPs to inform the H&N service of vulnerable patients coming through the pathway and discuss patients who have previously had a H&N patient and may have late effects or consequences of treatment.

Conclusion

The service has provided a valuable opportunity for the UCLH H&N cancer service to support GPs and their patients who have suspected H&N cancers. The service has resulted in expedited pathways for a number of patients and led to picking up a cancer in 10.8% of patients discussed. The service has also saved patients and service time where a referral was not necessary.

We are now continuing to use the service to strengthen links between the department and Primary care and exploring opportunities to integrate a direct referral option to further improve the functionality and reduce the administrative burden on busy clinical teams.

Reference (if applicable)

Local GP feedback: ‘I saw a patient who had been for a routine ultrasound on a thyroid lump. The report results indicated new nodules, but the grading system is not something I am familiar with interpreting, so I wasn’t sure if the nodules were suspicious. I forwarded the report and scan via the Suspected Head & Neck Cancer messaging line for advice. I received a response who advised that I should make a 2WW referral and that she would book the patient in for a fine needle aspiration without needing a clinic appointment first. As a result, the patient’s care was fast-tracked, and they were put on the cancer pathway the same day.’
In addition the service was awarded “highly commended” in the Consultant Connect 2023 Awards in the area of innovation.

Patient reported outcome measures of head and neck cancer patients treated with curative intent radiotherapy within the Head and Neck 5000 cohort

Oral

Dr. Siona Growcott [1], ***Mr. Todd Dembrey*** [2], ***Dr. Yasmin Odding*** [1], ***Dr. Tom Dudding*** [3], ***Dr. Sarah Hargreaves*** [1]

1. *Bristol Haematology and Oncology Centre,* ***2.*** *University Hospitals Bristol and Weston NHS Foundation Trust,* ***3.*** *Bristol Dental School, University of Bristol, UK*

Aim

Real world patient reported outcomes (PROs) [1] of acute and late toxicity following curative intent radiotherapy for head and neck cancer (HNC) is lacking, especially for older and/or frailer patients. HNC incidence increases with age [2] and an estimated 16% of patients are WHO performance status (PS) 2-4 at the point of treatment decision [3].

Head and Neck 5000 (HN5000) is a prospective clinical cohort study. It is one of the largest clinical cohort studies of patients with HNC in the world and has allowed us to perform longitudinal analysis of a large group of patients usually underrepresented in clinical trials.

We used the HN5000 data to assess whether increased age and/or reduced PS led to:

(a) Increased severity of acute radiotherapy toxicity;

(b) Increased severity of late radiotherapy toxicity;

(c) Reduced rate of completing radiotherapy.

Method

HN5000 recruited >5500 patients with new HNC diagnoses across 76 UK centres between 5/4/2011 and 31/12/2014.

Inclusion criteria: Primary tumours in the oral cavity, oropharynx, nasopharynx, hypopharynx, larynx, salivary glands, nasal cavity and sinuses. Patients treated with definitive or adjuvant radiotherapy +/- concurrent chemotherapy or cetuximab within 4 months of HN5000 consent. All ages and WHO PS.

Exclusion criteria: Patients with carcinoma of unknown primary, thyroid cancer and non-head and neck ICD codes. Patients treated with surgery alone or with palliative intent.

Outcome measures included: age, gender, smoking status, TNM staging, completion of prescribed course of radiotherapy, PRO questionnaire at baseline/4 months/12 months and 3-5 years after HN5000 study consent. PRO scores of 3-4 (high) represented worse symptoms compared to 1-2 (low).

Analysis was performed using R. Odds ratios, 95% confidence intervals and Fisher's exact test were calculated.

Results

3800 patients with oropharynx (47.4%), larynx (23.5%), oral cavity (16.1%), nasopharynx, hypopharynx, salivary gland, nasal cavity and sinus cancer (13%) were included in our analysis. 525 were aged ≥70 and 500 were PS ≥2. PS data was missing for 1107 patients.

In patients aged ≥70, the odds of scoring high on PRO questions assessing acute and late radiotoxicity were reduced. Conversely, the odds were increased for patients PS ≥2, particularly for oropharynx and larynx subsites (Fig. 1 – 3).

The odds of not completing radiotherapy were increased for both patients aged ≥70 [OR 3.44 (95% CI 1.84 – 6.45), p <0.001], and patients who were PS ≥2 [OR 3.68 (95% CI 1.66 - 8.15), p 0.002].

Conclusion

Of interest, the severity of acute and late toxicity was almost universally reduced in patients aged ≥70 whilst increased in PS ≥2. Age ≥70 and PS ≥2 appears to be associated with increased odds of not completing radiotherapy.

To our knowledge, this is the largest known dataset of PROs of older, frailer patients with HNC who have received curative intent radiotherapy. Our work suggests that PS, rather than age alone, is a better prognostic indicator for severity of acute and late effects.

Logistic regression analysis is planned to assess for confounding variables, e.g. TNM stage, chemotherapy, cetuximab and smoking status.

Reference (if applicable)

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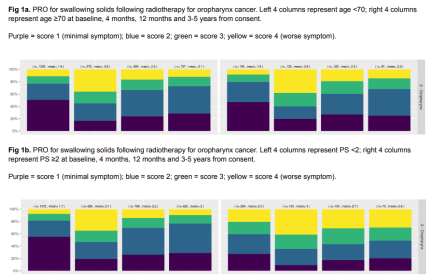

Fig 1.png

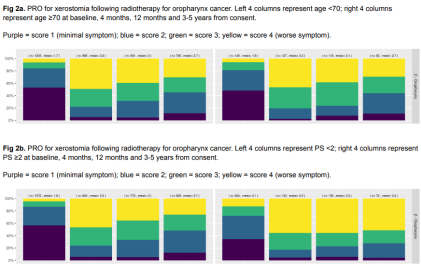

Fig 2.png

Fig 3a. PRO for hoarse voice following radiotherapy for larynx cancer. Left 4 columns represent age <70; right 4 columns represent age ≥70 at baseline, 4 months, 12 months and 3-5 years from consent.

Purple = score 1 (minimal symptom); blue = score 2; green = score 3; yellow = score 4 (worse symptom).

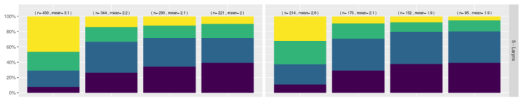

Fig 3b. PRO for hoarse voice following radiotherapy for larynx cancer. Left 4 columns represent PS <2; right 4 columns represent PS ≥2 at baseline, 4 months, 12 months and 3-5 years from consent.

Purple = score 1 (minimal symptom); blue = score 2; green = score 3; yellow = score 4 (worse symptom).

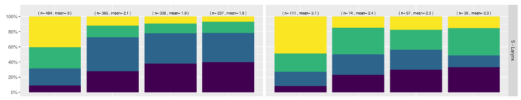

Fig 3.png

Patient Reported Voice Outcomes for Early Laryngeal Cancer: A UK-Based Multi-Centre Study

Oral

Ms. Mandeep Bhabra [1], ***Ms. Diane Sellstrom*** [2], ***Mrs. Sinead Rothrie*** [3], ***Ms. Grainne Brady*** [3], ***Ms. Emer Fahy*** [4], ***Ms. Ceri Robertson*** [5], ***Ms. Laura-Jayne Watson*** [6], ***Ms. Sarah Woodman*** [7], ***Prof. Jo Patterson*** [6]

1. *South Tyneside and Sunderland NHS Foundation Trust,* ***2.*** *The Newcastle Upon Tyne Hospitals NHS Foundation Trust,* ***3.*** *The Royal Marsden Hospital,* ***4.*** *Clatterbridge Cancer Centre,* ***5.*** *Sheffield Teaching Hospitals NHS Trust,* ***6.*** *Liverpool University,* ***7.*** *South Tees NHS Foundation Trust*

Aim

Patients with early laryngeal cancer experience voice changes after both surgical (TLM) and non-surgical (Radiotherapy) treatments. Studies reporting voice outcomes, including patient-rated voice-related quality of life (QOL) outcome measures, with surgical and non-surgical treatments are unclear. Variations in the patient-reported outcome measures used, timing of measurement, and single-centre studies, make it difficult to understand the impact of voice changes on patients' QOL. Consequently, providing clear information about how vocal function might be affected after either treatment remains a challenge.

To investigate patient-reported voice outcomes (VHI-10) following surgical and non-surgical treatment for early laryngeal cancer.

Method

This prospective multi-centre cohort study assessed a total of 137 patients diagnosed with early laryngeal cancer (T1a-T2 treated with either 1) transoral laser microsurgery (TLM) or 2) low dose radiotherapy up to 55Gy from November 2020 to December 2023. As part of routine clinical Speech & Language Therapy data collection, voice assessment occurred at three time points: pre-treatment, three and six months post-treatment. A combination of objective (Maximum Phonation Time), expert-rater assessed (Grade-Roughness-Breathiness-Asthenia-Scale), and patient-reported outcomes (VHI-10) were collected. Data analysis on patient-reported outcomes at pre and 3 months post-treatment is presented. Analysis of Covariance (ANCOVA) was used to analyse VHI-10 at three months comparing laser and radiotherapy treatment, controlling for pre-treatment VHI-10 as a covariate. A change of 6 points in VHI scores constitutes a clinically meaningful difference.

Results

The sample (n=137) consisted of 80% males and 20% females. The majority (85.4%) were aged between 51 and 80 years. Of the cohort, 85% presented with SCC of the glottis, 10% anterior commissure, 4% supraglottis, and 1% subglottis.

A total of 90 patients completed VHI-10 at pre-treatment and 3 months post-treatment. In the radiotherapy cohort (n= 53), VHI scores were lower at 3 months post-treatment compared to pre-treatment (MD: -8.66, SD 11.46, 95% CI 5.5, 11.8 $p<0.001$) demonstrating a statistically significant and clinically meaningful difference. The TLM cohort (n=37) showed no significant difference between pre and 3-month post-treatment VHI scores (MD 1.30, SD 11.56, 95%CI -5.2, 2.5 $p>0.05$). Treatment type (radiotherapy and TLM) on pre and 3-month post-treatment VHI-10 scores was compared using a one-way ANCOVA Bonferroni test for multiple comparisons. There was a statistically significant difference in VHI-10 scores between both treatments ($F = 16.7$, $p = <0.001$).

Conclusion

Multi-centre collaboration enabled larger, prospective unified data collection across the UK. In this observational study, two-thirds of the sample were retained for analysis. One-third was lost to follow-up due to patient transfer to local clinics.

Patients report an improvement in their voice outcomes after radiotherapy at 3 months post-treatment. Patients undergoing TLM, may not report notable changes in their voice after treatment. This will help patients understand the trajectory of voice recovery, and manage patient expectations after either treatment.
To our knowledge, this is the first multi-centre prospective study comparing validated patient-reported voice outcomes in early laryngeal cancer pre and post-treatment. Analysis of Maximum Phonation Time and GRBAS data is planned.

Prognostic significance of systemic inflammatory markers in oropharyngeal squamous cell carcinoma

Oral

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Aim

Incidence of oropharyngeal squamous cell carcinoma is on the rise in developed countries due to an increase in HPV related carcinogenesis. Currently, the HPV+ OPSCC is associated with better long-term survival outcomes and there are ongoing trials on de-escalation treatment for this cohort. Systemic inflammatory blood markers were previously found to be prognostic factors in patients with other head and neck cancers. The cancer-induced inflammatory response leads to changes in neutrophils, lymphocytes, monocytes and platelets in peripheral blood, which can be used to predict the survival of patients with cancer. Little is known about systemic inflammatory markers in relation to oropharyngeal cancer specifically. The aim of this study was to assess the prognostic significance of systemic inflammatory markers in oropharyngeal cancer.

Method

All OPSCC patients presenting between January 2012 and March 2019 were identified from the West of Scotland Head and Neck Cancer multidisciplinary team database and data collected retrospectively from the electronic patient record. ROC curves were constructed, and significant cut-off values obtained in respect to overall death for age, albumin, neutrophil-lymphocyte ratio, platelet-lymphocyte ratio, lymphocyte-monocyte ratio, systemic immune inflammation index. Kaplan-Meier survival curves were constructed for the following variables and stratified by HPV status; median survival times were obtained. Univariate and multivariate analysis of patient survival has been run in respect to the above variables, their HPV status and AJCC TNM8 stage.

Results

676 patients that had bloods taken within a month before diagnosis were identified. The mean age was 60.6, 76.2% were males, 50.7% were current smokers. 46.4% were HPV-negative of which 76.4% were proclaimed dead at the time of data collection with mean survival time of 28.1 months. 29.3% presented with stage I, 17.2% with stage II, 20.3% with stage III, 33.3% stage IV.

The cut-off values for overall survival were age 62.5 years, albumin concentration 35.5g/L, NLR 4.0, PLR 205.1, LMR 2.2, SIII 823.1.

There was a significant difference in survival over time and median survival times in relation to all inflammatory markers for overall cohort and after stratification by HPV status.

In multivariate analysis, independent predictors of survival were found to be: age (95%CI HR: 1.190-1.857), negative HPV status (95%CI HR: 1.123-2.253), TNM8 stage, low albumin (95%CI HR: 0.370-0.581), high NLR (95%CI HR: 1.065-1.982), low LMR (95%CI HR: 0.563-0.966).

Conclusion

The data suggests that values of low albumin, high NLR and low LMR are independent variables that could be used to predict patient survival outcomes. These are easily available indices obtained during routine blood screen for all patients. Given their significance in outcome prediction, they may be a helpful adjunct when assessing patients at the MDT.

Although significant, the study did not account for association of inflammatory markers with other factors e.g., smoking, malnutrition, or underlying disease and therefore, these may not be directly associated with cancer pathogenesis.

Additionally, this study cohort had high smoking rates and lower overall survival rates, unlike many other oropharyngeal case series which could be potential confounders in association with inflammatory markers. Therefore, a larger, multi-centre study is required to ensure that the cohort is more generalisable to the UK population to predict the survival outcomes more reliably.

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		Overall cohort	HPV+	HPV-	
N		676 (100%)	362 (53.6%)	314 (46.4%)	
Age (years)		60.6 (±9.7)	58.0 (±9.1)	63.5 (±9.7)	
Sex (%males)		76.2	82.6	68.8	p<0.001
TNM8 stage					p<0.001
	I	198 (29.3%)	162 (44.8%)	36 (11.5%)	
	II	116 (17.2%)	84 (23.2%)	32 (10.2%)	
	III	137 (20.3%)	116 (32.0%)	21 (6.7%)	
	IV	225 (33.3%)	0 (0.0%)	225 (71.7%)	
Alcohol consumption status					p<0.001
	Occasional consumption	227 (33.6%)	150 (41.4%)	77 (24.5%)	
	Current excess	192 (28.4%)	71 (19.6%)	121 (38.5%)	
	No consumption	136 (20.1%)	87 (24.0%)	49 (15.6%)	
	Previous excess	84 (12.4%)	31 (8.6%)	53 (16.9%)	
	Unknown	37 (5.5%)	23 (6.4%)	14 (4.5%)	
Smoking status					p<0.001
	Current smoker	343 (50.7%)	121 (33.4%)	222 (70.7%)	
	Ex smoker	171 (25.3%)	106 (29.3%)	65 (20.7%)	
	Never smoked	152 (22.5%)	129 (35.6%)	23 (7.3%)	
	Unknown	10 (1.5%)	6 (1.7%)	4 (1.3%)	
Number of dead		354 (52.4%)	114 (31.5%)	240 (76.4%)	p<0.001
Mean survival time (months)		36.9	44.6	28.1	p<0.001
Mean albumin concentration (g/L)		36.9	38.2	35.4	
Mean NLR		3.8	3.4	4.3	
Mean PLR		177.7	173.3	182.7	
Mean LMR		2.8	2.9	2.7	
Mean SIII		1057.5	943.2	1189.3	

Cohort descriptives.png

Variable		HPV+		HPV-	
		Median survival time	95%CI median survival time	Median survival time (months)	95%CI median survival time
Age					
	<62.5 years	N/A	N/A	28.0	15.1-40.9
	>62.5 years	60.0	40.7-79.3	11.0	7.7-14.3
Albumin concentration					
	<35.5g/L	25.0	14.4-35.6	6.0	2.8-9.2
	>35.5g/L	110.0	72.3-147.7	31.0	19.4-42.6
NLR					
	<4.0	110.0	72.3-147.7	26.0	16.1-35.9
	>4.0	50.0	37.3-62.7	9.0	4.8-13.2
PLR					
	<205.1	110.0	72.2-147.8	23.0	16.1-29.9
	>205.1	57.0	37.9-76.1	10.0	4.9-15.1
LMR					
	<2.2	60.0	35.0-85.0	10.0	7.9-12.1
	>2.2	N/A	N/A	28.0	15.3-4.,7
SIII					
	<823.1	N/A	N/A	33.0	18.8-47.2
	>823.1	63.0	47.6-78.4	10.0	7.7-12.3

Median survival times per systemic inflammatory blood markers and stratified by hpv status.png

	Mean univariate HR	95%CI univariate HR	p-value	Mean multivariate HR	95%CI multivariate H	p-value
Age >62.5 years	2.427	1.966-2.995	<0.001	1.486	1.190-1.857	<0.001
HPV status (negative vs positi	3.5	2.796-4.381	<0.001	1.591	1.123-2.253	0.009
TNM8 stage						
I vs II	2.182	1.441-3.305	<0.001	1.839	1.207-2.802	0.005
I vs III	3.042	2.071-4.469	<0.001	2.407	1.631-3.553	<0.001
I vs IV	7.729	5.504-10.854	<0.001	3.615	2.344-5.575	<0.001
Albumin concentration <35.5g/	0.274	0.221-0.338	<0.001	0.463	0.370-0.581	<0.001
NLR >4.0	2.517	2.026-3.126	<0.001	1.453	1.065-1.982	0.018
PLR >205.1	1.983	1.589-2.474	<0.001	1.023	0.769-1.361	0.877
LMR <2.2	0.436	0.353-0.538	<0.001	0.738	0.563-0.966	0.027
SIII >823.1	2.295	1.854-2.840	<0.001	1.176	0.881-1.568	0.271

Multivariate and univariate hazard ratio analysis.png

RAPTOR: Randomised Controlled Trial of PENTOCLO in Mandibular Osteoradionecrosis

Oral

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Aim

Osteoradionecrosis (ORN) is a well-recognised and feared complication following curative treatment of Head & Neck Cancer with radiotherapy. There are no medical treatments with high-level evidence, and many patients deteriorate to the point where they need multiple hospital admissions, destructive removal of all necrotic bone and complex reconstruction. A combination of three repurposed drugs, pentoxifylline, tocopherol and clodronate (termed PENTOCLO), has been suggested as being able to heal ORN in the majority of cases but requires at least 12 months of treatment. In successful cases, it has stopped disease progression, improved symptoms and facilitated the exfoliation of necrotic bone. To date, there have been no randomised trials comparing PENTOCLO against control treatments, but single-arm studies have been encouraging.

RAPTOR aims to compare standard supportive care (SSC) against SSC plus PENTOCLO in treating ORN of the mandible.

Method

RAPTOR is an ope-label, multi-centre, superiority RCT measuring time-to-healing as the primary endpoint. The secondary endpoints are time to worsening ORN, analgesia and antibiotic usage, grade of ORN, quality of life (EORTC QLQ-C30 and QLQ-H&N35), mandibular preservation rate, compliance, BMI and adverse events. There are also exploratory endpoints to establish the utility of a patient-facing App (ePROM) to measure symptoms whilst on trial. Patients are assessed at clinic visits every three months and supported by blinded remote assessment of primary and secondary endpoints using clinical photographs.

Inclusion criteria include adult patients with a diagnosis of mandibular ORN suitable for non-surgical management. Exclusion criteria include the inability to swallow tablets, clinical indication for mandibular resection, very early ORN (<20mm2 of exposed bone) within 12 months of dentoalveolar surgery, pathological fracture secondary to ORN, and acute infection.

We aim to recruit 120 patients over a 2-year recruitment window.

Results

The trial has recently opened for recruitment. At the time of writing, nine centres are open. RAPTOR has faced significant challenges in greenlighting sites due to local R&D and pharmacy capacity barriers. This has been considered secondary to post-COVID effects, with many sites having a backlog of trials to open. There is a need to accelerate recruitment to the trial by opening more sites or 'Patient Identification Centres' that refer potentially eligible patients to recruiting sites. Early data will be presented.

RAPTOR is registered with the NIHR Associate Principle Investigator (PI) scheme to allow trainees an opportunity to deliver a portfolio trial under the mentorship of an enthusiastic PI.

Conclusion

For the first time, the activity of PENTOCLO is being robustly compared with a control group. These results will

form the basis of future treatment decisions and/or inform the necessity for a larger phase III trial in mandibular ORN. The trial will also explore using an App to collect ePROM data, which will inform its suitability for other trial applications.
The trial design will be presented along with early data to raise awareness of RAPTOR within the ideal target audience of BAHNO members and conference delegates.

Targeted neck dissection using pre-operative on-table ultrasound localisation for impalpable neck recurrences from differentiated thyroid cancer: technique and outcome comparison with compartmental neck dissection

Oral

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Aim

Differentiated thyroid cancer (DTC) recurrence affects 10% of low-risk patients, who constitute the majority of the patient population. In neck recurrences, compartmental dissection of the targeted level is generally recommended, while selective lymph node excision may be considered if the targeted neck level has previously undergone dissection. On-table ultrasound scanning can enhance localisation, particularly in cases involving impalpable lymph nodes and extensive scarring due to radioactive iodine treatment or prior exploration of the neck. In this study, we describe our practical approach of targeted neck dissection using pre-operative localisation (PoL) with on-table ultrasound scanning and compare its outcomes to the compartmental approach.

Method

30 adult patients with neck recurrence of DTCs between 2013 and 2022 were included in this retrospective cohort study. All had undergone previous total thyroidectomy and neck dissection. 16 patients (group 1) underwent targeted neck dissection with on-table PoL, while 14 patients (group 2) underwent compartmental neck dissection with regular pre-operative imaging. Outcomes were then compared between the two groups.

Results

Group 1 exhibits a statistically significantly higher rate of positive lymph nodes (58%) compared to group 2 (18%). There was no significant difference between the two groups in post-operative thyroglobulin drop and recurrence. The number of previous neck dissections is higher in group 1 though the difference is not statistically significant while both groups have similar length of stay and complication rates.

Conclusion

Targeted neck dissection using PoL is an effective and safe approach for neck recurrences in DTC patients, particularly when involving impalpable lymph nodes and extensive scarring.

VOYAGER: an international consortium pooling data to investigate the impact of human papilloma virus and genetics on oral and oropharyngeal cancer

Oral

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Aim

Head and neck cancer is the seventh most common cancer globally, accounting for more than 660,000 new cases and 325,000 deaths annually. Established risk factors include tobacco smoking and alcohol intake, with human papilloma virus infection, particularly high-risk subtype 16 (HPV16), known to influence oropharyngeal cancer risk.

However, only a small proportion of those with HPV16 develop cancer and therefore a better understanding of the role of host genetics, in addition to modifiable risk factors, is required.

This paper aims to describe an international head and neck cancer consortium from across Europe and North America to provide detailed risk factor, clinical and genetic oral and oropharyngeal cancer data.

Method

The VOYAGER (human papillomaVirus, Oral and oropharYngeal cAncer, GEnomics, and suRvival) consortium includes data from several European, North American and Canadian Centres. Continuous variables were described using means and standard deviation. Categorical variables were described as counts and percentages. Survival analysis is currently ongoing.

Results

The VOYAGER dataset includes 7,233 cases and 3,297 controls, with n= 3,006 oral cavity cancer cases and n= 3,520 oropharyngeal cancer cases. Almost all cases (93%) were squamous cell carcinoma. 37% of oral cavity cancers and 71% of oropharyngeal cancers were recruited at stage IV. HPV serology is available for 73% of cases (n= 5,294). Only 3% of oral cavity cancers were HPV16 positive, compared with 65% of oropharyngeal cancers, with most patients diagnosed in the 6th and 7th decade of life. Almost all cases and controls have germline genotype data available, with n= 1,817 sent for somatic sequencing. Oral cavity cancers are predominantly treated with surgery (46%) and/or adjuvant therapy (39%), whilst oropharyngeal cancers were predominantly treated with radiotherapy alone (16%) or chemoradiotherapy (49%).

Conclusion

This is one of the most comprehensive genetically-backed head and neck cancer datasets globally, which will aim to improve diagnosis, prognosis and management of this disease through future studies.

"I said… I was having a bit of treatment on my neck." Experiences of self-disclosure from head and neck cancer (HNC) survivors.

Oral

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Aim

While many cancer survivors struggle with side-effects and impairments to quality-of-life (QoL), there is increasing recognition that a large proportion may also experience positive psychological changes, often termed post-traumatic growth (PTG). These PTG experiences occur in HNC but appear to be less common than in other cancers. More generally, psycho-social outcomes are also often poorer in HNC than other cancers. Self-disclosure about trauma, and positive responses to that disclosure may facilitate PTG, but this has been little investigated in cancer. With the longer-term goal of informing psycho-social interventions to improve QoL after HNC, this qualitative study aimed to explore experiences of self-disclosure in HNC survivors. Secondary aims were to: (i) compare and contrast men's and women's experiences of self-disclosure and (ii) identify potential barriers and enablers to the use of self-disclosure to process trauma of HNC.

Method

We conducted semi-structured interviews with twenty HNC survivors who were within nine months to five years of completing their treatment (male n= 11, female n= 9). They represented a range of sites and stages of tumour and treatment experiences. The interviews explored their diagnosis and treatment experiences, including how they were supported by others. We used codebook thematic analysis and a framework approach to identify and explore self-disclosure and to qualitatively compare survivor experiences.

Results

Analysis led to construction of three themes surrounding experiences of self-disclosure: social support (whether to disclose or not; nature, depth, and timing of disclosure), decision-making (who to speak with, shared experiences, and feelings about overall support), and impact (emotional and verbal reactions and lost relationships). Survivors disclosed to spouses, partners, friends, and nurses but did not favour formal group support settings. Self-disclosure within shared experiences with other cancer patients was welcomed and elicited further disclosure. Negative reactions by others to changes in appearance or cancer side-effects acted as a barrier to further disclosure. Analysis suggested some gendered differences related to managing the nature, depth, and timing of disclosure experiences, e.g., disclosure was often directed towards fulfilling emotional needs for women but towards more practical needs for men.

Conclusion

This is the first study to explore the experiences of self-disclosure as a potential facilitator of PTG in HNC survivors. While all participants disclosed to some extent, depth or value of disclosure did not necessarily equate to closeness of relationships or length of interaction. Gendered experiences may reflect societal differences in emotional and practical needs and may go some way to explaining higher rates of PTG reported in women. These findings could support intervention development towards facilitating self-disclosure experiences that support people with HNC to successfully move on from the trauma of their experiences.

Poster

“To flap or not to flap, that is the question”: Objective analysis of management of reconstructive approach in early tongue squamous cell carcinomas.

Poster

Dr. Elizabeth Crosbie-Jones [1], ***Dr. Searan Karamchandani*** [2], ***Mr. Benjamin Olley*** [1], ***Ms. Emily Gallagher*** [3], ***Ms. Mary Lee*** [1], ***Dr. Roganie Govender*** [2], ***Mr. Axel Sahovaler*** [1], ***Ms. Clare Schilling*** [1]

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Aim

The reconstructive algorithm for cT1-cT2 tongue cancers is influenced by location, patient factors and neck management. There is a paucity of reports about functional outcomes with and without free flap reconstruction in early stage tongue squamous cell carcinomas (SCC). We looked at cT1 and cT2 tongue cancers undergoing wide local excision (WLE) with and without free flap reconstruction, analyzing several oncologic and objective functional outcomes.

Method

Retrospective study of cT1-T2 tongue tumours operated between 2016-2022 at a cancer referral center. Tumour characteristics, type of surgery (free flap vs no free flap), margins, feeding tube use, functional outcomes – using the performance status score (PSS) and Functional Intraoral Glasgow Score (FIGS) post-operative complications and survival were analyzed using univariate analysis. Those with previous head and neck cancer or receiving post operative radiotherapy (PORT) were excluded from functional analysis.

Results

Thirty-five (70%) patients were managed by WLE-only and fifteen (30%) underwent free-flap reconstruction. Mean feeding tube duration was longer in the reconstructed cohort (13.4 days v 5.90 p=0.02); with 25% of reconstructed patients requiring feeding tube at discharge vs. 9.5% of the WLE-only group. There were reductions in both groups in all aspects of functional assessment immediately post-operatively, however at 6 months there was a global return to baseline. At 6 months the reconstructed group had a significant decrease in chewing and swallowing (FIGS Chew p=0.03, FIGS Swallow p=0.02), compared to the WLE-only group.

There was no difference in the severity of surgical complications (Clavien-Dindo score) in either cohorts (p=0.60). No involved margins were recorded; with no significant difference in negative or close margins between the two groups (p=0.090). Overall survival, disease-free survival, and disease-specific survival were similar (OS p=0.671, DFS p=0.238, DSS p=0.765 median follow-up 18.5 months, range 2-78).

Conclusion

In this group 70% of cT1-T2 tongue SCC were managed without reconstruction. The reconstructed group had larger resections, despite no difference in tumour dimension. There was no involved or differences in excisional margins, post-operative complications, or survival between the two groups. When comparing the groups at 6 months, there was reduced swallow and chewing function in the reconstructed cohort. Our findings provide objective functional implications to aid patients and clinicians in deciding upon tongue reconstrution as a feasible management option.

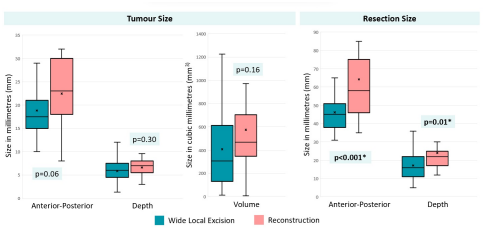
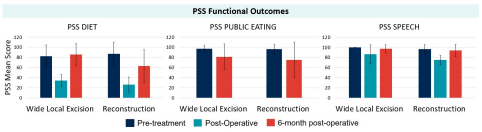


Figure 1. Tumour and resection size of both Wide Local Excision and Reconstruction group with corresponding p-values in each measurement. P-values are shown as significant with an asterisk (*).

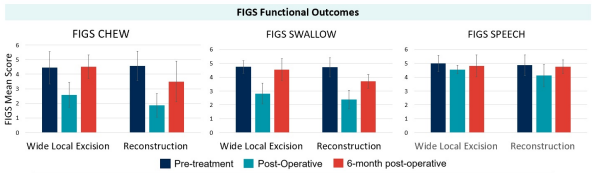
Bahno-tumour and resection size.jpg



	Surgical Management	P-value	
		Pre-treatment vs post-operative function	Pre-treatment vs 6-month post-operative function
PSS Diet	Wide Local Excision	**p<0.001***	p=0.75
	Reconstruction	**p=0.001***	p=0.09
PSS Public Eating	Wide Local Excision	[redacted]	p=0.42
	Reconstruction		p=0.09
PSS Speech	Wide Local Excision	**p<0.01***	p=0.17
	Reconstruction	**p=0.05***	p=0.70

Figure 2. Performance Status Scale (PSS) functional outcomes in the Wide Local Excision and Reconstruction group. The table demonstrates the statistical significance between mean PSS scores pre-treatment compared to immediately post-operatively; and pre-treatment with 6-month post-operatively. P-values are shown as significant with an asterisk (*).

Bahno-pss functional outcomes.jpg



	Surgical Management	P-value	
		Pre-treatment vs post-operative function	Pre-treatment vs 6-month post-operative
FIGS Chew	Wide Local Excision	**p<0.001***	p=0.79
	Reconstruction	**p=0.003***	p=0.14
FIGS Swallow	Wide Local Excision	**p<0.001***	p=0.26
	Reconstruction	**p=0.003***	p=0.09
FIGS Speech	Wide Local Excision	**p<0.001***	p=0.68
	Reconstruction	p=0.218	p=0.70

Figure 3. Functional Intraoral Glasgow Score (FIGS) functional outcomes in the Wide Local Excision and Reconstruction group. The table demonstrates the statistical significance between mean FIGS score pre-treatment compared to immediately post-operatively; and pre-treatment with 6-month post-operatively. P-values are shown as significant with an asterisk (*).

Bahno-figs functional outcomes.jpg

1 year and 3 year outcomes for a cohort of patients with serious mental health or substance abuse supported by a dedicated head and neck psychiatric mental health nurse

Poster

Mr. muhammad alvi [1], ***Mr. Stuart Price*** [1], ***Mr. Richard Oakley*** [1]

1. *Guys and St Thomas NHS foundation trust*

Aim

Head and neck cancer (HANC) is rising in socioeconomic groups 4 and 5 despite overall decline [1,2]. These groups encounter barriers in accessing head and neck services, leading to challenges in treatment initiation and completion and overall survival [3]. The South East London Cancer network initiated a pilot program introducing a community mental health nurse (MHN) to the HANC team in November 2019.

Method

We prospectively collected data for all patients referred to a single MHN. We collected data on diagnosis, treatment intent, treatment completion, patient engagement and overall outcome.

Results

Over the specified timeframe, 124 patients were referred. Substance abuse, low mood/anxiety, and current inpatient status at a mental health unit were prevalent reasons for referral. 22 patients failed to engage with head and neck services entirely. 38 patients completed all investigations and no malignancy detected. 50 patients had confirmed HANC. 29 were offered curative treatment, and successfully completed the intervention. The remainder failed to complete treatment (4) or declined curative intention (8). Palliative care was extended to 12 patients. The one year survival of patients treated with curative intent was 89.3% (25/28), with 71% (20/28) alive today. Those treated with palliative intent 83.3% (10/12) had died with average time to death of 10.9 months

Conclusion

A community MHN within the HANC team has proven vital in facilitating patient engagement in this cohort. Results regarding treatment completion, one year survival and overall access show significant improvements. We suggest that an MHN is a vital member of the MDT in these patients.

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A comparative analysis of radiological and pathological staging and the need for adjuvant therapy in surgical management of early stage 16+ve SCC of the oropharynx

Poster

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Aim

Counselling for patients with early stage p16 +ve presumed HPV induced oropharynx SCC prior to surgical intervention is challenging due to a number of factors. These include the ability to identify and or adequately resect the primary and the unknown pathological status of the neck. To consent patients as accurately as possible regarding the risks and likelihood receiving adjuvant therapy following surgery, a better understanding of the correlation between radiological and pathological staging is needed.

Method

57 consecutive patients undergoing oropharynectomy and neck dissection were identified from a contemporaneous data base of head neck cancer surgery held at Royal Devon University Hospital. Patients undergoing open procedures, salvage surgery or who were P 16 negative were excluded from this analysis. All patients underwent contrast MRI and FDG PET-CT imaging as part of pre-operative staging workup. Radiological staging was compared with pathological stage following surgical excision of the primary site and neck. For the neck, staging was made using the 7th TNM guidelines to distinguish between stage not requiring adjuvant therapy as defined in current and recent trials (PATHOS and ECOG 3311) (TNM 7^{th} N1) and nodal stage were adjuvant therapy would be recommended (TNM 7 N2 a and above). Analysis of divergence from assumed primary treatment and the need adjuvant therapy was made.

Results

Data on 39 patients with primary resection and neck dissection were analysed. 80% of patients with unknown primary malignancies identified and up-staged following surgery (T0-T1/2). Pathological staging of the initial primary was consistent with radiological staging in 90% of T1 and 95% of T2. In 39 patients undergoing neck dissection, by 7^{th} edition staging, 12 (29%) were N0, 19 were N1 (45%), 8 were N2a/b (19%). In N0 disease, 4 out of 12 patients were up staged by pathology (33%; 2 to N1 one each to N2a/N2b) with no ENE and 2 out of 12 (17%) received adjuvant therapy. In N1 disease , 10/19 (53%), were up-staged (5 to N2a and 4 to N2b, with one to N3). 47% of patients in this group received adjuvant RT and 5% received CRT. In N2a/N2b disease 5/10 (50%) were upstaged to N2b (n=4) or N3 (n=1) with 10% receiving CRT.

Conclusion

Surgery for early p16+ve oropharynx SCC is effective at identifying unknown primaries. Radiological assessment of the primary when identified is consistent with the pathology in most cases. 1 in 3 patients with N0 radiological neck will be upstaged by surgery although less than 1 in 5 will need adjuvant therapy. 1 in 2 patients with a solitary node <3cm will be upstaged by surgery with all likely to be offered RT. The rates of triple modality therapy are low overall but increase with neck nodal status.

A comparison of attitudes to (chemo)radiotherapy for older adults with HNC: a time trade off study

Poster

Ms. Emer Fahy [1], ***Mr. David Hamilton*** [2], ***Prof. Jo Patterson*** [3], ***Prof. Simon Rogers*** [4], ***Mrs. Laura White*** [5], ***Mrs. Caryn Molloy-Humphreys*** [5], ***Mrs. Elizabeth Scanlan*** [5]

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Aim

Over 12,000 new cases of Head and neck cancer (HNC) are diagnosed annually in the UK, the highest incidence in those aged >70 years. With an ageing population these numbers are set to increase. Older people with HNC will value a "health state" such as life after treatment depending on the priorities they place on their level of independence, current quality of life and survival outcomes. One method of reviewing how people make treatment decisions is using time trade off (TTO). TTO provides a useful insight into the trade-offs which patients with head and neck cancer face when choosing treatment modalities, particularly in this older cohort who are typically absent in the literature. We reviewed how three distinct groups trade off years of life in their current health with years of life following non-surgical treatment for HNC in older adults in 3 health states; optimal, sub-optimal and poor treatment outcome

Method

Three health state descriptors were developed depicting the treatment outcomes for non- surgical treatment for HNC in an older adult; optimal outcome, sub-optimal outcome and poor outcome. These were presented to three distinct cohorts; adults over the age of 65 who did not have a diagnosis of HNC, HNC healthcare professionals and non-HNC health care professionals. All participants initially completed the EQ-5D to establish their current health. The participants were then offered a choice between 2 alternatives, to remain in one of the health states for 10 years or to retain their current health but with a decreased survival [x years]. This is varied until the participant becomes indifferent between the two alternatives, at which point the utility value for that health state is derived. Differences in health utilities assigned to the differing health states were compared using average utility values.

Results

A total of 32 participants took part in the study; 12 older adults, 10 HNC healthcare professionals and 10 non-HNC healthcare professionals. The average ages were 77.6, 42.5 and 35.7 respectively.

A utility value is a value between zero and 1 in which zero is equal to "being dead" and 1 is equal to "normal health".

There was a variability in responses seen, particularly with sub-optimal outcome. HNC healthcare professionals rated sup-optimal outcomes significantly higher (0.7) than older adults (0.29) and non-H&N healthcare professionals (0.32). For all groups, poor treatment outcomes were rated very poorly with a consistently low utility value, although again H&N healthcare professionals rated this higher (0.1) than older adults and non-HNC healthcare professionals (0.04 & 0.08).

With all health states, HNC healthcare professionals assign the highest utility value, followed by non- HNC healthcare professionals with older adults consistently assigning the lowest utility values.

Conclusion

This study intended to review and compare the differing outcomes of radiotherapy (+/- chemotherapy) in older adults with head and neck cancer by three groups of people. When presented with these outcomes, older adults

were seen to consistently assign a lower utility value to all outcomes in contrast to their younger counterparts. In addition to this, H&N healthcare professionals were seen to rate these health states higher than those professionals not working in head and neck cancer. There is a significant shift in the literature encouraging us to practice shared decision-making and ensuring we take the patient's values and priorities into account. The patient's involvement in decision-making is central to this process, we as health care professionals must be mindful that our values or opinions on health states will often not correlate with our patients and this will have a significant impact on the shared decision-making process.

A population-based analysis of the socio-demographic inequalities in the referral routes of patients with hypopharyngeal cancer

Poster

Dr. Helen Pearce [1], ***Prof. Linda Sharp*** [2], ***Mr. James O'Hara*** [1], ***Ms. Ruth Norris*** [3], ***Ms. Jennifer Deane*** [3]

1. *The Newcastle Upon Tyne Hospitals NHS Foundation Trust,* ***2.*** *Newcastle University,* ***3.*** *Population Health Sciences Institute, Newcastle University Centre for Cancer, Newcastle University, Newcastle, UK*

Aim

In the UK, cancer of the hypopharynx accounts for approximately 3% of all head and neck cancers (HNC)[1]. Hypopharyngeal cancer often presents at a late stage, so it is important referrals of suspected cancers are made promptly. Referral pathways include standard referral from primary care, a 2 week wait (2WW) referral or emergency presentation to secondary care. Evidence suggests there is an association between low socio-economic status (SES) and HNC incidence which poses significant concern due to their increasing role in preventable deaths[2]. This study adopts a population-based approach and explores socio-demographic inequalities in referral routes of patients with hypopharyngeal cancer.

Method

Registrations for all patients with incident primary hypopharyngeal cancer (ICD C13) diagnosed in England between 2006 and 2014 were abstracted from the National Cancer Registration Database (NCRD; n = 1,535). Each case was assigned one of eight possible routes to diagnosis, based on where in the health service the patient had originated[3]. Cases with missing referral routes (n= 38) and those diagnosed only at the time of death (DCO n=1) were excluded, leaving 1,496 patients for analysis. Two analyses were undertaken with the aim to investigate the link between socio-demographic inequalities and the route to diagnosis of hypopharyngeal cancer: (i) comparing emergency presentation vs all primary care routes; and (ii) among those patients originating in the community, comparing 2WW referral vs standard care routes (standard GP, inpatient, outpatient (other) and outpatient (dentist) referrals). Multivariable logistic regression determined the likelihood of diagnosis route based on patients' socio-demographic and clinical characteristics.

Results

The number of hypopharyngeal cancers diagnosed annually rose from 401 in 2006-2008 to 586 in 2012-2014. Two-thirds of cases were male (67%); and over 80% were of white ethnicity (84.0%) with the vast majority residing in an urban environment at time of diagnosis (83.6%). The total number of 2WW referrals increased over time, as did the number of emergency presentations to secondary care. In multivariable models, patients presenting as an emergency were more likely to be older, male and reside in deprived areas. Those presenting via the 2WW pathway were typically male, residents in an urban area regarded as more deprived and were aged between 65-79 years old.

Conclusion

There are socio-demographic inequalities across several independent referral routes into secondary care. These findings highlight the urgent need for additional studies analysing more up-to-date data to enable a greater understanding of the extent and nature by which SES factors impact hypopharyngeal cancer diagnosis, thus helping to guide future service provision and impact positively on patient outcomes.

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A prospective cohort study of oral nutritional supplement use following primary Trans-Oral Robotic Surgery in early oropharyngeal squamous cell carcinoma

Poster

Mr. William Spittles [1]

1. *Nottingham University Hospitals NHS Trust*

Aim

Transoral robotic surgery (TORS) is changing the management of early oropharyngeal squamous cell carcinomas (OPSCC) providing an alternative treatment option to primary head and neck radiotherapy/chemoradiotherapy (RT/CRT). Previous studies have reported on functional swallowing outcomes following TORS, however oral nutritional supplement (ONS) use has not been considered. The aim of this study is to quantify ONS reliance in patients with OPSCC treated with primary TORS.

Method

Data was collected from patients with a diagnosis of OPSCC (staging T1-2, N0-1 TNM8) treated with primary TORS between December 2022 and June 2023 at a large teaching hospital Trust. Methods of data collection were a combination of face-to-face dietetic reviews or telephone consultations during the immediate post-operative period (days 2-5), at three months and at six months. ONS reliance was defined as patients routinely taking ACBS approved oral nutritional supplements, as prescribed by a specialist dietitian.

Results

Fifteen patients were treated with primary TORS with (n=7) or without (n=8) adjuvant therapy. In the immediate post-operative period 13 patients were routinely using ONS as prescribed by the dietitian to help meet their nutritional requirements (one patient (n=1) declined due to ONS palatability and one patient (n=1) required nasogastric tube feeding). At 3 months 7 patients continued to require ONS, with five of these patients actively receiving adjuvant RT/CRT. At six months, 5 patients remained reliant on ONS, four of which had completed adjuvant RT/CRT.

Conclusion

The majority of patients undergoing TORS as primary treatment for OPSCC were found to require ONS in the immediate post-operative period. Requirements for ONS appear to reduce over time however a proportion of patients continue to require ONS at 3 and 6 months, highlighting the key role of the dietitian. This may be due to acute toxicities related to multi-modality treatment. Further large scale research is required to establish whether ONS use is related to functional swallowing outcomes following TORS with or without adjuvant therapy.

A qualitative investigation of electrolarynx speakers post total laryngectomy: variations in electrolarynx provision, support and communication outcomes.

Poster

Ms. Amy Sweetman [1]***, Dr. Annie Hurren*** [1]

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Aim

Total laryngectomy requires a new communication method, with the electronic larynx (EL) being a potential option offered in line with UK guidelines for head and neck cancer practice (Clarke et al., 2016). Research has consistently rated the EL as less preferrable or intelligible in comparison to surgical voice restoration (SVR) or oesophageal voice (van Sluis et al., 2018), although studies largely focus upon listener perception, rather than the EL user's viewpoint. Studies to date have reported that EL users have the lowest voice-related quality of life, in comparison to users of other alaryngeal communication options (Moukarbel et al., 2011). However, these quantitative studies have often used rigid, self-report scales which are unvalidated for alaryngeal voice, with a lack of research qualitatively investigating the personal experiences of EL users. This study aimed to provide an in-depth, holistic perspective of EL user experience following total laryngectomy to address this paucity of research.

Method

Recruitment was carried out via social media (Twitter) and support group *The National Association of Laryngectomee Clubs (NALC)* using a convenience sampling approach. Volunteers were required to be UK residents over eighteen years of age who had undergone total laryngectomy and regularly used an EL to communicate. Data was collected using semi-structured online interviews via Microsoft Teams using a pre-prepared question script with scope for participants to guide the conversation as preferred. Topics covered included initial EL training post-surgery, reasons for chosen alaryngeal voice option and its impact upon successful communication with others. Verbatim transcripts of each interview were typed up, anonymised then analysed using reflexive thematic analysis (Braun and Clarke, 2006). Codes were generated to mark patterns of both semantic and latent meaning within each interview, these codes were grouped together and analysed further to identify common themes and subthemes across the dataset.

Results

Six male EL users aged between 60 and 89 years who met the inclusion criteria were recruited as study participants. Thematic analysis of interview data identified three overarching themes in participants' responses. 1) Choices and Changes: relating to choosing the EL, perceptions of voice quality, the practical adaptations required to speak using the EL and device costs. 2) Support Systems: highlighting the value of assistance provided by healthcare workers, peers and patient groups. The latter were especially identified as a key source of reassurance and enjoyment; however it was also noted that in-depth EL training and support may not be universally received post-laryngectomy. 3) Shared Conversations: relating to communicating with others and useful listener and environmental adaptations. Patient conversation partners who lip-read were identified as supportive, with high background noise, telephone use and listeners who made little effort to attune to electrolaryngeal voice reported as barriers to communication.

Conclusion

This study found the EL to be a viable and functional method of communication following total laryngectomy for many who volunteered to participate. However, some participants faced challenges related to a reported

lack of initial EL training post-surgery, reduced voice quality of less-sophisticated devices and communication breakdowns in social situations or over the telephone. Results highlighted how reasons for using a chosen alaryngeal voice method are highly personalised, dependent on individual situation and may change over time. Although SVR is considered the gold standard of alaryngeal communication, patients who prefer or require an EL may benefit from enhanced education, training and support including a patient buddying system. Regular audit of EL provision and training by NHS services could facilitate optimal patient support and services should ensure all patients are offered peer support and onward signposting to support groups post-laryngectomy.

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van Sluis, K. E., van der Molen, L., van Son, R. J., Hilgers, F. J., Bhairosing, P. A., and van den Brekel, M. W. (2018) Objective and subjective voice outcomes after total laryngectomy: A systematic review. European Archives of Oto-Rhino-Laryngology, 275 (1) January, pp. 11–26.

A qualitative study exploring the design of a patient-reported symptom-based risk stratification system for suspected Head and Neck cancer referrals

Poster

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Aim

The EVEREST-HN programme aims to develop and evaluate a patient-reported symptom-based risk stratification system as part of a new pathway for suspected head and neck cancer (sHNC) referrals. Patients will be asked to complete an electronic questionnaire about their symptoms soon after referral. Symptom information will be obtained from patients before they attend hospital, rather than at their urgent specialist appointment, which may allow for earlier risk stratification. It may also allow more efficient targeted investigations for higher-risk patients and lower-risk patients may avoid unnecessary investigations.

The EVEREST-HN programme comprises six interlinked work packages and this abstract describes the first. Work package 1 aims to understand: how clinicians ask questions and decide subsequent steps for patients referred with sHNC; the language patients and clinicians use to describe symptoms; how clinicians reassure and discharge low-risk patients; patients' and clinicians' views of the current diagnostic process for head and neck cancer.

Method

The study employed qualitative methods including observation and recordings of clinic consultations, and analysis of referral documentation. Data were collected at three acute NHS Trusts with variation in service delivery models. Sites were recruited to ensure a broad mixture of social, economic and cultural backgrounds of potential participants. Analysis proceeded concurrently with data collection using a rapid qualitative analysis approach[1,2] Data collection was completed in November 2023.

Results

One-hundred and fifty-six adults referred for sHNC, and 21 clinicians including different subspecialties were recruited across three sites. Analysis is ongoing and will be completed by May 2024. The questions clinicians asked during consultations explored most symptoms within the Head and Neck Risk Calculator V2 (HaNC-RC), such as a new neck lump and hoarse voice,[3] although there were no examples in our sample of two symptoms (stridor and persistent head and neck skin lesion). Clinicians also asked questions about other symptoms not included in HaNC-RC, for example nasal problems. Recordings provided examples of how clinicians distinguish symptoms, such as differentiating the sensation of a lump from a palpable lump and of how differences in language used to describe symptoms are overcome so that clinicians achieve a clear understanding of a patient's history. Clinicians engage in much emotional labour in consultations – reassuring, building rapport, empathising, information giving and clarifying.

Conclusion

The findings have implications for the development of a patient-reported symptom questionnaire to use within a risk stratification system. As well as ensuring the language is understandable, it will be important to consider how the emotional needs of patients can be met if a symptom questionnaire is used. The findings also have wider implications for understanding the impact of language on emotionally evocative healthcare interactions.

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A rare case of tonsillar metastases from NSCLC, pulmonary adenocarcinoma

Poster

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Aim

Tonsillar metastases from distant primaries are rare, making up 0.8% of all tonsillar malignant tumours. Lung metastases have been reported with the most common histological type of small cell lung cancer (SCLC). Here, we present a rare case of non-small cell lung cancer (NSCLC) of pulmonary adenocarcinoma-type that presented with tonsillar metastases.

Method

An 86-year-old female was referred to the Head and Neck department in Guy's Hospital with a 5-week history of left tonsillar swelling, misdiagnosed as tonsillitis. She reported tonsillar ulceration, odynophagia, dysphagia and right-sided back and shoulder pain. The medical history was significant for hypertension, type-2 diabetes, and gastro-oesophageal reflux disease. She was a past smoker. She reported no chest symptoms. Examination revealed bilateral submandibular lymphadenopathy and right-sided supra- and infra-clavicular lymphadenopathy. Intra-orally, there was left tonsillar enlargement with ulceration.

Results

CT neck, thorax, abdomen and pelvis demonstrated a 6.5cm right lobe primary bronchial malignancy with multiple infiltrative mediastinal and cervical lymph nodes. There were multiple high-density nodules involving the left soft palate, abdominal wall, peritoneum, adrenal glands and left clavicle, concerning for metastatic deposits. Biopsy of the right cervical lymph node and left tonsil revealed strong positivity for CAM5.2 and TTF1 tumour stains (negative CD45 and CD20), consistent with metastatic lung NSCLC, favouring pulmonary adenocarcinoma. The final staging was T4N3M1c. The patient was not for active treatment and suitable for palliative care.

Conclusion

Pulmonary adenocarcinoma is the most common type of NSCLC, frequently metastasising to regional lymph nodes and extra-pulmonary organs. Metastasis to the tonsils is rare. The diagnostic complexity of cancer requires MDT approach including expert radiological and histopathological diagnosis with immunohistochemistry as a useful adjunct to distinguish between primary and secondary tumours. Screening of the oral cavity is important for complete staging of cancer patients.

A systematic review of prognostic models for predicting recurrence and survival in patients with treated oropharyngeal cancer

Poster

Dr. Ahmad K. Abou-Foul [1], ***Dr. Janine Dretzke*** [2], ***Mx. Esther Albon*** [2], ***Dr. Malcolm Price*** [2], ***Prof. Hisham Mehanna*** [3], ***Dr. Paul Christopher Nankivell*** [4]

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Aim

The incidence of oropharyngeal cancer (OPC) is increasing, mainly driven by HPV-related tumours. Prognostic information is crucial for both OPC treatment planning and patient counselling. Low-risk patients might be suitable for treatment de-escalation trials, whereas high-risk patients may require more intensive therapy. The AJCC TNM classification system only classifies patients into risk groups, but its utility is limited at the individual patient level. This systematic review (SR) evaluates externally validated models for individualised prediction of recurrence or survival in adults treated with curative intent for OPC.

Method

The SR was registered with PROSPERO (CRD42021248762), as a part of a broader SR work package for the PET-NECK 2 programme. Adhering to PRISMA guidelines, a series of comprehensive literature searches included MEDLINE, Embase, and IEEE databases from 2005 to September 2023 without language or publication type restrictions, using terms related to OPC and prognostic models. Titles and abstracts were screened by multiple reviewers with expertise in SRs, selecting externally validated multivariable models with at least one clinical predictor variable. Data extraction included patient characteristics, study design, model variables, outcomes like survival rates, and model performance measures. For risk of bias (RoB) assessment, we used the PROBAST criteria. Model discrimination was presented in forest plots whenever possible, categorized by outcome and model, using c-indices to indicate discriminatory ability. Quantitative pooling wasn't done due to differences in populations, follow-up lengths, and performance metrics.

Results

Fifteen studies developing and/or evaluating 25 individualised risk prediction models were included, **Figure 1.** Most models had reasonable performance on discriminatory ability for overall survival and disease specific measures (c-indices 0.7-0.8); but none consistently performed very well (c-indices >0.8) (**Figure 2)**. One model (focusing only on HPV-negative patients) had a lower C-index, which improved significantly with an added radiomics score. Another model also benefitted from a radiomics score, but excluding HPV status as a predictor reduced its effectiveness. For recurrence-related outcomes, model performance varied, making comparison difficult. However, nine models reported C-indices, mostly within the 'good' 0.7-0.8 range**.** Four studies benchmarked their models' performance to TNM staging system, that consistently underperformed the developed models. All models had a high RoB based on PROBAST, mainly due to concerns around analysis domain (**Figure 3**).

Conclusion

All models had a high RoB based on PROBAST assessment. Nonetheless they mostly performed well in terms of discriminative ability (c-index >0.7), though none consistently showed a very good discriminative ability (c-index >0.8). Further external validation of existing models to assess generalisability should be limited to those models including HPV status as a variable. Development and validation of future models should be considered in HPV+ or HPV- cohorts separately to ensure model representativeness.

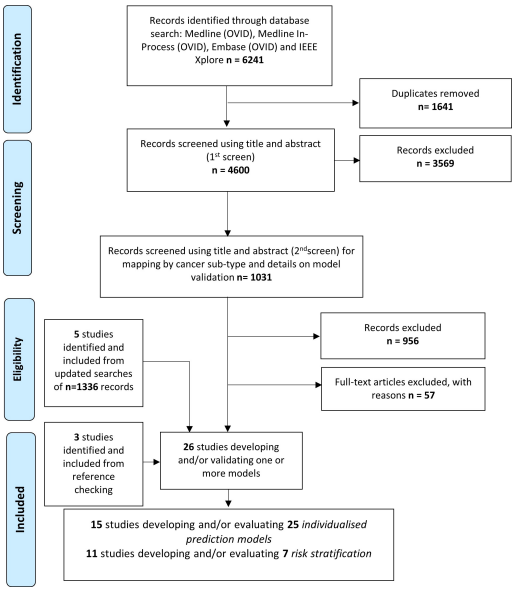


Figure 1.jpg

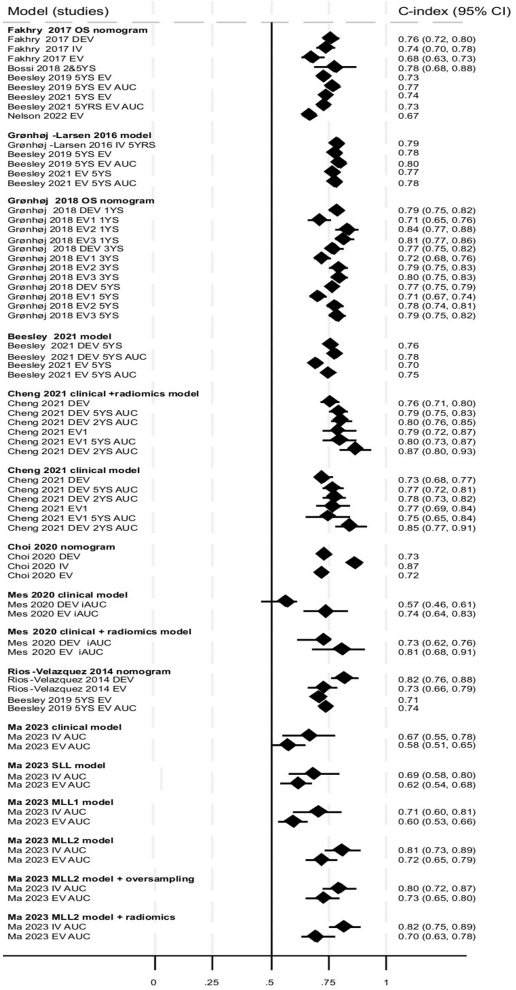
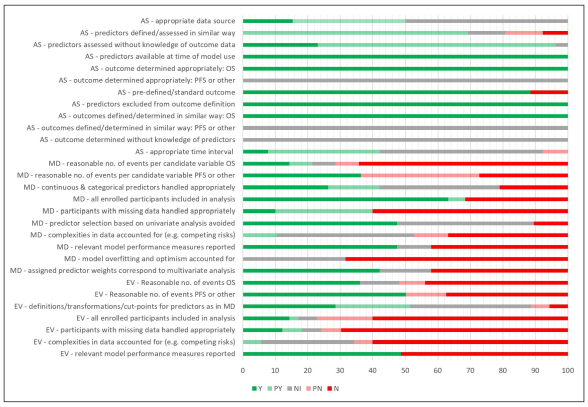


Figure 2.png

Figure 3: PROBAST Risk of Bias summary for all included models (Oropharyngeal cancers)



PROBAST Risk of Bias: Y, yes; PY, probably yes; NI, no or insufficient information; PNSS, probably no; N, no. AS: all study cohorts; MD: model development cohorts; EV: external validation cohorts.

Figure 3.jpg

An audit of the dietetic rehabilitation service for patients with Head and Neck cancer receiving radiotherapy at a tertiary London cancer centre

Poster

Ms. jennifer cornish [1]

1. *University College London Hospital*

Aim

Patients with head and neck cancer undergoing radiotherapy are at risk of malnutrition as a result of the site of their cancer and the side effects of treatment. National guidance from ENT-UK on nutritional management[1] recommend that nutritional intervention is offered for up to three months after treatment and concurs with the guidelines issued by The Clinical Oncology Society of Australia [2]: 'Patients should be seen fortnightly for at least six weeks post-treatment and reviewed by the dietitian for up to six months or for as long as they require management of chronic toxicities, weight loss or tube feeding'.

In this centre, patients are reviewed within two weeks post-radiotherapy, but there is no standardisation of review frequency thereafter. The aim is to determine the:

1. Frequency and duration of dietetic follow up post curative radiotherapy at this centre.
2. Duration of enteral feeding up to 12 months post-radiotherapy.

Method

Retrospective case note review from electronic records between 1/6/21 and 31/11/21 (6 months). Adult patients (>18 years) undergoing curative radiotherapy for head and neck cancer were included. Patients receiving treatment with palliative intent were excluded.

Demographic data was collected including age, sex, disease characteristics including tumour site; tumour stage; treatment type. Nutritional information was collated including presence and type of enteral feeding tube; number of dietetic reviews at 2,4,6 weeks and 6 months; duration to feeding tube removal post-RT; duration to discharge from the head and neck cancer dietetic service. Descriptive statistics were conducted including average follow up frequency; the average time to discharge; tube usage data. This audit was registered with the clinical support services division locally and ethical approval was not required. Patients were screened against the NHS data opt-out register in line with data protection regulations and those opting out were excluded prior to analysis

Results

Records of 33 patients were reviewed. Patient characteristics are shown in **Table 1**. Patients were predominantly male, with a mean age of 60 years. The most frequent head and neck sub-sites were oropharynx and oral cavity. A third of patients underwent surgery prior to their radiotherapy and 39.4% were given chemotherapy alongside radiotherapy.

Twenty-three patients (69.7%) had a prophylactic gastrostomy tube placed. One gastrostomy patient died by 6-months, three died by 12-months (plus one non-gastrostomy patient) and they were therefore excluded from the analysis at these points. Five patients (21.7%) had their feeding tube removed by 3-months post treatment, sixteen patients (72.7%) had the tube removed by 6-months and eighteen (90%) by 12-months.

Frequency and duration of dietetic follow up is shown in **Table 2**. 78.1% of patients were followed up for at least 6 months and 9% of patients received fortnightly follow up for the first 6 weeks.

Conclusion

At this centre, patients are followed up for 6 months whenever clinically indicated; over 90% of gastrostomy patients were reviewed beyond 6 months, despite the majority having their tube removed within 6 months. Previous studies suggest that the duration of enteral feeding is affected by clinical and non-clinical factors[2].

All patients are reviewed in the fortnight post-treatment but only a small percentage receive follow-up 2-4 weeks and 4-6 weeks post-treatment. Radiotherapy side-effects begin to abate during this period and a systematic review found consistent improvements for quality of life, nutritional status, symptom morbidity and dietary intake when follow-up was provided weekly on-treatment and fortnightly post-treatment. Changes to the radiotherapy rehabilitation service are being considered in the light of this.

This was a retrospective single centre audit with a small sample size; therefore findings have limited generalisability. Future work should consider a national audit and, locally, a re-audit following service changes.

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Table 1. Patient characteristics

Variable	Number of patients (n, %) unless otherwise specified
Sex	
Male	26 (78.8)
Female	7 (21.2)
Age	
Mean Age	60 years
Age range	32 years - 80 years
Tumour site	
Oropharynx	9
Oral cavity	7
Larynx	6
Nasopharynx	4
Hypopharynx	2
Unknown Primary	3
Other	2
T classification	
T4	4 (12.1)
T3	7 (21.2)
T2	9 (27.3)
T1	9 (27.3)
T0	2 (6)
Tx	1 (3)
Other	1 (3)
N Classification	
N3	2 (6)
N2	4 (12.1)
N1	10 (30.3)
N0	15 (45.5)
Other	1 (3)
M Classification	
M0	33 (100)
Treatment	
Radiotherapy	10 (30.3)
Chemoradiotherapy	12 (36.4)
Surgery + adjuvant radiotherapy	10 (30.3)
Surgery + adjuvant chemoradiotherapy	1 (3)

Table 1.png

Table 2. Frequency and duration of dietetic follow up

	All: N=33	PEG (N= 22) or RIG (N= 1)	Oral intake only (N= 10)
Average number of reviews in first 6 weeks (n)	3.1	3.8	1.9
- **Reviewed in first fortnight (%)**	97%	100%	90%
- **Reviewed in second fortnight (%)**	21.2%	21.7%	20%
- **Reviewed in third fortnight (%)**	24.2%	34.8%	0%
- **Reviewed fortnightly for 6 weeks (%)**	9%	13%	0%
Followed up for 6 months or more (%)	78.1%[a]	91%[a]	50%

[a]for n=22 as n=1 deceased and therefore excluded

Table 2.png

An Evaluation of Biochemical Testing in Major Head and Neck Cancer Surgery

Poster

Ms. Emma Watts [1], ***Dr. Dani Bleysebastiani*** [1], ***Ms. Mairenn Garden*** [1], ***Mr. Jonathan Fussey*** [1], ***Mr. Paul Pracy*** [1], ***Mr. Chris Jennings*** [1], ***Mr. Paul Nankivell*** [1], ***Mr. Neil Sharma*** [1]

1. *University Hospitals Birmingham*

Aim

Nutritional status, oxygenation, infection, comorbidities and thyroid hormone function all influence wound healing. Hypothyroidism is a frequent complication of major head and neck surgery. Whilst current research supports the early detection of iatrogenic hypothyroidism, the potential benefits of routine pre-operative thyroid function tests (TFTs) prior to laryngectomy and laryngopharyngectomy remain to be determined. Acute phase proteins (like CRP) fluctuate in response to inflammation. Whilst a persistently high CRP is associated with a greater risk of pharyngocutaneous fistulae, its impact on other complications following major head and neck surgery are less well known. Poor post-operative nutritional status demonstrates association with poor wound healing. However, pre-operative identification and optimization of high-risk patients with low albumin remains uncommon. This study aims to identify pre- and post-operative predictors of complications following major head and neck cancer surgery.

Method

We performed a retrospective analysis of 270 laryngectomies and laryngopharyngectomies between 01/01/09 and 01/01/24 at a major UK head and neck centre. Data was collected regarding patient demographics, co-morbidities, primary diagnosis, length of stay, further management, and complications. These statistics were correlated with pre- and post-operative thyroid function tests, albumin, haemoglobin and serial post-operative CRP. Complication rates were compared between patients undergoing salvage laryngectomy and primary laryngectomies, in addition to the surgical technique for reconstruction.

Results

Over 270 patients were identified; 82% were male with a mean age of 60 years. 57.4% (n=155) received post-operative radiotherapy and mean length of stay was 30.3days. Over half the cohort developed complications (53.7%, n=145); wound infection (16.3%) and salivary fistula/leak (16.7%) proved most common and 10% (n=27) required a return to theatre. Thyroid function tests were performed preoperatively in 9.3% (n=25), none of whom were pre-operatively hypothyroid. Postoperatively, 50% (n=135) were tested within the first 12 months, of which 60%(n=81) were tested within 6 weeks. 10.4% (n=14) of these patients had low T4, of which 42.9% (n=6) were commenced on levothyroxine. Hypothyroid patients were not significantly more likely to develop salivary fistula/leak (35.7%) compared with euthyroid patients(16.7%)(OR 2.14, CI[0.9545-4.8107], p= 0.0647). Irrespective of thyroid function testing, 18.1% (n=49) were prescribed levothyroxine on discharge. Analyses of pre- and post-operative haemoglobin, CRP and albumin levels are awaited.

Conclusion

Complications following major head and neck surgery can have implications for morbidity, prolonged hospital stay, greater treatment costs, delays in commencing adjuvant therapy and quality of life. Our data suggest pre-operative TFTs before major head and neck surgery for cancer is uncommon and post-operative TFTs are not

routine. Unfortunately, numbers were insufficient to comment on whether major complications like salivary fistulae are associated with hypothyroidism. Further research is required into the impact of pre-operative hypothyroidism on complication rates. Nutritional status should be optimized pre-operatively in order to support wound healing and reduce complication rates. Finally, serial post-operative CRP levels should be correlated with clinical assessment in order to aid early identification of complications.

Analysis of the fundamental features of observer responses to facial prosthetics worn by individuals who have undergone head cancer treatment or experienced traumatic injury: a systematic review.

Poster

Mrs. Caroline Reed [1], ***Dr. Sam Harding*** [2], ***Dr. Jonathan San Diego*** [1], ***Prof. Trevor Coward*** [1]

1. *King's College London,* ***2.*** *North Bristol NHS Trust*

Aim

A person's face reflects their personality, identity and emotions, and it is often one of the most visible parts of the body besides being of critical importance during social interaction. When something happens that alters a person's appearance from what is considered 'normal' it can alter people's reactions towards, and interactions with, that person as well as impacting how the person feels about themselves. This may be a result of a person undergoing cancer surgery, or because of trauma, and they may be left with a significant visible facial difference such as a missing part of their face. One option of rehabilitation is to provide the person with a custom-made facial prosthesis to restore the missing facial feature. However, to make an informed decision as to whether a facial prosthesis is the ideal treatment, one consideration the patient may have is how other people would react to the artificial substitute.

Method

The purpose of this systematic review is to identify the core characteristics of reactions towards someone wearing a facial prosthesis because of cancer or a trauma to the face.

The review followed recommendations by the Preferred Reporting Items for Systematic Review and Meta-Analyses Statement (PRISMA). The protocol was registered in the Prospero Database (registration number CRD42023389229).

A comprehensive Mesh search string was conducted for OVID MEDLINE, APA PsycINFO, Cochrane Library, EMBASE, CINAHL and ERIC. 2392 titles were identified and were assessed by two reviewers.

Eligible studies include those reporting an empirical evaluation of the effectiveness of an intervention. To ensure all relevant literature is retrieved, a range of study designs will be included. These include randomised control trials (RCTs), experimental and quasi-experimental studies, within subject designs, cohort studies and case studies (which may include multiple baseline or other systematic manipulation of the intervention).

Results

Fifteen papers were taken to full text review, all of which were excluded as they did not meet the inclusion and exclusion criteria of the paper.

Conclusion

Patients' feelings about their prosthesis important, however, the reactions of others can have a great impact on social life and mental health; without understanding what these reactions really are, a person is left to guess and assume, but ultimately have no evidence to challenge their own thoughts or behaviours and implement change.

This systematic review highlights a lack of information in this specific area of research that may be of great benefit to patients considering wearing a facial prosthesis, clinicians treating patients with facial prostheses and, support groups helping individuals cope with their changed appearance.

Anaplastic Thyroid Cancer outcomes in the North East of England

Poster

Mrs. lucy lee-warder [1], ***Ms. Ashleigh Ivy*** [1], ***Mr. David Hamilton*** [1]

1. *The Freeman Hospital*

Aim

Anaplastic thyroid cancer (ATC) is rare, with less than 100 new cases in the UK each year. It carries a poor prognosis due to its aggressive nature and early metastasis, with median survival of around 5 months. Consequently it has been historically difficult to accumulate enough patients for clinical trials on which to base best practice. As a result, survival has not improved over the last decade despite multimodality treatment options being available, and decisions around how to manage these patients are still extremely challenging. Our aim, therefore, was to review the outcomes of ATC patients in the north East of England to help inform current practice.

Method

We retrospectively reviewed ATC patient notes over 12 years across 5 centres in the North East of England

Results

There were 28 eligible patients (14 women; median age 74 years). 15 patients had distant metastases (IV-C). Overall median survival was 4.75 months. Patients presenting with earlier stage disease were more likely to be treated radically. 15 patients had primary surgery (8 with unknown pathology), 5 primary chemoradiotherapy (CRT), 4 palliative radiotherapy and 4 best supportive care (BSC). Median survival in the primary surgery and CRT groups was 7.64 and 7.67 months respectively compared with 1.78 months in the BSC group.

Conclusion

Patients with ATC demonstrate poor prognosis despite multimodality treatment. Difficulties in obtaining definitive histological diagnosis may lead to potentially unnecessary surgery in the context of limited survival. Similarities in survival between the primary surgery and CRT groups raises questions around the role of surgical management in certain patients. Development of a national ATC database from which to draw further conclusions is vital.

Assessing the application of PICO dressings in the management of head and neck free flap donor sites

Poster

Ms. Diana Norinho [1], ***Mr. Rafal Niziol*** [1], ***Mr. Mustansir Alibhai*** [1], ***Mr. Joey Valencia*** [1], ***Ms. Florentina Prisacaru*** [1], ***Mr. Steve Bellingham*** [1], ***Mr. Alastair Fry*** [1]

1. *Cromwell Hospital, London*

Aim

Free tissue transfer is considered standard of care for major defects of the head and neck after ablative surgery for malignancy and has lead to improved outcomes for patients undergoing head and neck cancer treatment. However, patients frequently experience significant donor site morbidity with delayed wound healing and skin graft loss leading to increased nursing input, regular wound clinic attendance and frequent dressing changes. We introduced the PICO® single use negative pressure wound therapy (NPWT) system, for our patients at The Cromwell Hospital with the aim of improving and simplifying the management of donor site wounds for our head and neck patients.

PICO® enables delivery of NPWT across the entire dressing to the wound, while simultaneously removing exudate. Reported advantages also include protection from external contamination; Promotion of changes in blood flow, Improved wound contraction and stimulation of granulation tissue formation.

Method

24 consecutive patients undergoing free flap surgery for Head and Neck defects at the Cromwell hospital had PICO® dressings applied to their donor sites at the time of surgery after wound closure with skin grafts. The series comprised 16 Fibular and 8 Radial forearm donor sites

The PICO® dressings were changed at day 7 and after wound inspection new PICO® dressings were applied. PICO® dressings were changed subsequently every 7 days as an inpatient or outpatient basis until sufficient healing judged. At which point wounds no longer required dressings and nursing input.

Results

All patients tolerated the PICO® dressings well and there was no negative impact on mobility or engagement with Physiotherapy.

Of the series of 24 patients, 1 patient had total skin graft loss at the donor site (Fibular) and 3 had partial graft loss (2 Fibular and 1 Radial).

Patients required PICO® dressings for 6-8 weeks post operatively.

Cost analysis performed, including staff training, nursing appointments, and consumables shows the estimated costs for using PICO® dressings for 40 patients a year to be £54,400. This compares with £76,000 for conventional dressings with additional nursing time and more frequent appointments for dressing changes. This represents a financial saving of £21,600 in consumables and nursing time.

Conclusion

PICO® dressings are well tolerated and suitable for head and neck patients undergoing free flap surgery.

PICO® dressings simplify the management of the donor site, reducing the need for frequent appointments for dressing changes.

PICO® dressings are cost effective and reduce the burden for patients who don’t need to attend for frequent dressing changes.

Initial evaluation shows good outcomes for wound healing.
Further prospective evaluation of clinical outcomes will be undertaken.

Reference (if applicable)

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Benefits of HyperSight Imaging in Radiotherapy treatment for Head and Neck Cancer

Poster

Dr. Amy Ward [1], ***Mr. Dom Withers*** [1], ***Mr. Ewan Almond*** [1], ***Ms. Siobhan Graham*** [1]

1. *Barking, Havering and Redbridge NHS Trust*

Aim

In 2023, our Radiotherapy Department upgraded the onboard imaging on our ETHOS linac to Varian's HyperSight. This is a new innovation using a combination of hardware and software to perform pre-treatment CBCT within 6 seconds with the capability to offer metal artefact reduction (MAR) and high-quality soft tissue contrast. Coupled with the ETHOS system it opens the potential for direct dose monitoring on a CBCT.

We hypothesised that these features would benefit head and neck cancer radiotherapy treatments for both daily image-guided radiotherapy (IGRT) soft tissue matching and to perform timely evaluations where there has been a change in a patient's contour without a lengthy manual process.

Method

Head and neck cancer patients felt to benefit from MAR CBCT were selected to be treated on the HyperSight-enabled linac. Images from their prior fractions with conventional CBCT were compared to HyperSight images. Additionally, patients requiring a first or additional dose evaluation were selected to have treatment fractions delivered on ETHOS using HyperSight.

Results

We saw improvement in ability to perform optimal IGRT matching around primary tumours in the chosen patients due to less artefact from dentures (Figure 1).

Dose evaluations were available after treatment delivery without any additional calculation by the Radiotherapy Physics team (Figure 2). This was a favourable time saving compared to our existing process which takes about 60 minutes to apply the tissue differences between planning CT and CBCT onto the planning CT and re-calculate the delivered plan.

Figure 1: Halcyon v2 iCBCT (left) and HyperSight MAR CBCT (right) of the same patient. Note reduction in image artefacts around dental fillings.

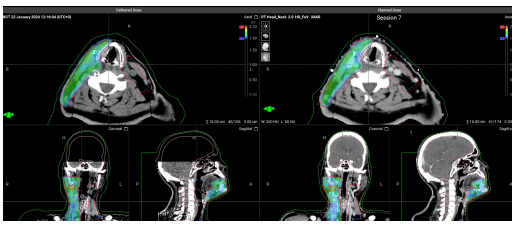
Figure 2: "on the spot" monitoring and evaluation of delivered dose distribution in Ethos

Conclusion

Whilst we have only been clinical with HyperSight imaging for a short period of time, we have been able to demonstrate benefits when treating head and neck cancer patients with radiotherapy.

For selected patients with metal artefact close to high dose target volumes the improved soft tissue definition and MAR can improve the IGRT match. This also has the potential to speed up the process which is valuable for improving experience of patients immobilised in a head and neck shell.

We continue to gain experience with "on the spot" dose evaluations with the aim of next steps of adaptive re-planning and re-calculation on HyperSight CBCT.



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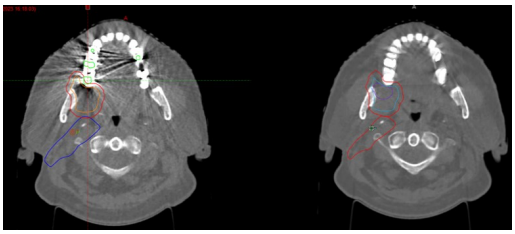

Imar vs halo head and neck.jpg

Best Timed Pathway in Head and Neck : The impact of CNS telephone triage for under 50’s before Day 3

Poster

Ms. Denise Flynn [1]

1. *University College London Hospital*

Aim

The aim of the service improvement was to increase capacity for suspected cancer referrals in the face to face clinic following industrial action and removal of the 14 day 1st appointment cwt.

Method

implementing the Risk assessment tool in telephone clinical triage for low risk patients
CNS triage at Day 0-3 - evaluate outcomes and straight to test for neck lump and thyroid

Results

Evaluation of CNS triage clinic from October 23- December 23
Number of downgrades from telephone appointment by CNS team
Number of cancers diagnosed < 50’s triaged by CNS team
Straight to test thyroid /neck lump <50’s

Conclusion

Pilot 1 month provisional Audit of 65 cases showed that 64 cases were non cancer
14 were downgraded by CNS team
1 confirmed cancer
This extended audit will be evaluating full implementation of CNS results for 3 months.

Beyond one year - are we doing enough? A cross-sectional study to understand the concerns of people following treatment for head and neck cancer

Poster

Mrs. Sinead Rothrie [1], ***Ms. Grainne Brady*** [1], ***Ms. Megan Eckford-Sealy*** [1], ***Prof. Justin Roe*** [1]

1. *The Royal Marsden Hospital*

Aim

Head and neck cancer (HNC) incidence continues to rise worldwide (Gormley et al 2022). Traditional risk factors include smoking and alcohol history as well as the increase of human papilloma virus (HPV) related disease (Sabathini et al 2020). Patient survivorship is an important cornerstone of the treatment pathway. The role of health professionals goes beyond the successful treatment of disease only (Nekhlyudo et al 2017). Known treatment sequalae include an ongoing impact on quality of life symptoms such as mobility, eating and drinking, psycho-social concerns and intimacy (Clarke et al 2016). We completed a cross-sectional study as part of a wider service evaluation (SE 1310) at a single tertiary referral centre in London to understand patient- reported concerns following treatment for HNC in a routine surveillance clinic.

Method

Data was collected face to face or virtually using the Patient Concerns Inventory for HNC Post Treatment (PCI HaNC-PT) (Rogers et al 2009) between October 2023 and January 2024. The PCI is a condition specific prompt list designed to be completed by patients prior to their consultation to ensure that issues related to physical or mental well-being are addressed by the clinical team (Rogers et al 2009). Patients were invited to complete the PCI-HaNC-PT which has five domains; physical and functional well-being, treatment related, social care and social well-being, psychological, emotional and spiritual well-being and a free text option. Following completion, they discussed the selected items with a member of the Speech and Language Therapy (SLT) team to inform provision of advice or signposting to relevant services including other health professionals (HCPs) and/or support with accessing tertiary community services eg. audiology.

Results

Data was collected from 60 patients over the specified 3-month time period. The sample included 52% male (n= 24) and 48% female (n=17). Median age was 63 (range 29-86 years). Tumour sites included; oropharynx 45% (n=22), parotid 14% (n=7), oral cavity 12% (n=6), nasopharynx 10% (n=5), laryngeal 6% (n=3). Other sites included tracheal 2% (n=1). Staging was classified (Amin et al 2017) as early (T1-2) in 59% (n= 27) and late (T3-4) in 14% (n=7), this data was missing in 24% (n=11) cases. Over two thirds of patients 77% (n=46) reported concerns with 1 or more items on the PCI and the median (IQR) number selected was 5 (1-19). Reported concerns are summarised in figure 1. The most frequently reported concerns were dry mouth 45% (n=22), swallowing 29% (n=14) and fear of recurrence 28% (n:14). Referral to SLT was initiated in 15% of cases (n= 7).

Conclusion

Our results are consistent with previous studies highlighting the most frequently identified concerns of patients using a PCI tool in different healthcare settings worldwide (Rogers 2019). These findings highlight unmet holistic needs within this population and the need to review current models of service delivery following HNC treatment. People reported benefits from completing the PCI and having time allocated to discussing their concerns with a HCP. This work supports the use of the PCI within SLT and AHP survivorship clinics. We are currently evaluating the value of the PCI as an adjunct to our work to establish new models of SLT-led HNC surveillance with the potential to benefit patient experience and care.

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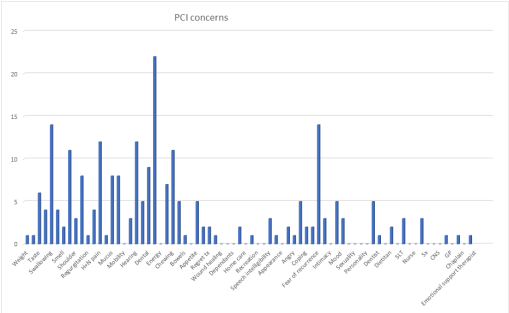

Pci concerns.png

BTM – A New Arrow in your Armoury of reconstructive tools for head and neck skin cancers.

Poster

Mr. Pratap Dutta [1], ***Ms. Venkata Bodapati*** [2], ***Mr. Azzam Khalaf*** [2]

1. *Skin cancer Lead and Reconstructive Plastic Surgeon, Manchester University NHS Foundation Trust,* ***2.*** *Manchester University NHS Foundation Trust*

Aim

Head and neck reconstruction is challenging because of the need for cosmesis, sensation and function of this highly visible region. This case series looks into the benefits of using Novosorb biodegradable temporising matrix (BTM) for skin cancer reconstruction in Head and neck region.

Aim is to evaluate the efficacy of BTM in reconstruction of complex defects after various H&N skin cancer excisions.

Evaluation of important outcomes including closure rates, time to healing, scar appearance, complication rates, function, sensation, and cosmesis of this highly visible region.

Method

This prospective study included adults who underwent wound reconstruction with BTM for head and/or neck skin cancers in a tertiary level Plastic Surgery unit.

Vital aspects of skin reconstruction were evaluated in patients who underwent reconstruction using Novosorb biodegradable temporising matrix (BTM).

1. Skin tone or texture match, healing over complex defects with exposed cartilage and bone.
2. Reduction in associated donor site morbidity.
3. Ability to withstand template infections and salvage without surgery.
4. Cost effectiveness of the BTM membrane with regards to avoiding lengthy, complex, and multi staged procedures.
5. Patient satisfaction with the results.

Results

We did 14 cases of Head and neck Skin Cancer reconstruction with BTM, every case healed well and none had problems with infection that needed further surgery. The chief findings were as below:

1. It reduces the need for major flap reconstructions and hence saves the patient from lengthy staged procedures, multiple follow-ups and avoids donor site morbidity.
2. In small skin defects, BTM can act as a bridge for complete healing without the need for a skin graft or any further reconstruction.
3. BTM can be applied under Local anaesthetic, thus facilitating optimal and cost effective use of theatres and resources in skin cancer management.
4. It is a synthetic membrane and resilient to infections, negating the need for further surgery to remove it.
5. Head and Neck Wound Reconstruction Using Biodegradable Temporizing Matrix Versus Collagen-Chondroitin Silicone Bilayer

Conclusion

BTM has proven to be an excellent aid in the reconstruction of defects in patients who underwent skin cancer excisions in the head and neck region, irrespective of the size and complexity of the defect. It is resilient to

infections and doesn't need removing in case of an infection, thus saves patients pain and trauma from multiple surgeries.

It is definitely more cost effective than staged complex reconstructive procedures. It is easy and fast to apply and needs less surgical expertise. It can be applied under LA hence GA theatres can be optimally used for other complex cases. It thereby saves NHS time, money and efforts and is a value addition in the management of head and neck Skin Cancers.

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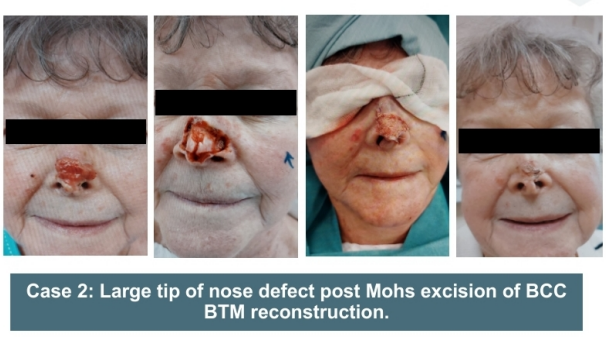

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Cancer stem cells and the tumour-immune infiltrate in oral cancer

Poster

Ms. Artysha Tailor [1], ***Ms. Sophia Lunetto*** [1], ***Dr. Adrian Biddle*** [1]

1. *Queen Mary University London*

Aim

Oral squamous cell carcinoma (OSCC) accounts for approximately 50% of all head and neck cancers. The mainstay treatment includes surgery with or without radiotherapy, chemotherapy and more recently immunotherapy. Despite this the five-year survival rate has improved little, remaining at 56.1%.

Tumour heterogeneity and the makeup of the immune infiltrate are both attributing factors to poor survival rates. Within the heterogenous tumour cell population are cancer stem cells (CSCs), a subpopulation of tumour cells with important metastasis driving and therapeutic resistance abilities. However, little is known about the interplay between CSCs and the tumour immune infiltrate. Therefore, the aim of this study is to identify interactions between CSCs and immune cells that impact on tumour progression.

Method

In order to investigate this, we have assessed a cohort of human archival OSCC specimens stratified on metastatic outcome. Qualitative scoring was completed of 49 haematoxylin and eosin stained OSCC specimens by two independent scorers, including a Consultant Pathologist. Results showed 86% of tumours displayed intra-tumoural heterogeneity for tumour differentiation status, and 100% showed intra-tumour heterogeneity in the immune cell infiltrate. This scoring provided broad relationships between tumour and stromal phenotypes, but lacked a detailed view of CSC and immune relationships.

Therefore, this scoring was used to identify 14 heterogenous cases with varying histological features, equally balanced on occurrence of cervical lymph node metastasis. These 14 specimens were used for multiplex immunofluorescence staining, using the Cell DIVE system. Specimens were stained for 15 antibody markers for CSC's and immune cell populations, including pan-cytokeratin, EpCAM, CD44, PDPN, CD24, Vimentin, NaK ATPase, CD3, CD4, CD8a, FOXP3, PD1, CD20, CD68, CD163.

Results

The analysis of the multiplexed data will be completed using an unbiased approach. Dimensionality reduction will be utilised to define and quantify CSC and immune cell phenotypes. Phenotypes will be quantified in tumoural and peri-tumoural regions. The spatial relationships will be studied using infiltration and neighborhood analysis between CSC and immune cell phenotypes.

Conclusion

Little is known about the interaction between CSCs and the immune infiltrate and if interaction between the two drives a more aggressive tumour phenotype. This study will help identify populations of interest. This is important as interfering therapeutically may improve outcomes.

CAre Pathway Time InterVals for patiEnts with oral cancer - impact on treatment outcomes (CAPTIVE-Oral Cancer)

Poster

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Aim

Optimising the duration of radiation therapy and reducing the time interval between surgery and initiation of adjuvant therapy appears to improve survival outcomes in head and neck cancer patients [1]. It is hypothesised that delays in primary treatment and completion of adjuvant radiotherapy can allow clonogen proliferation and initiate radioresistance in micrometastases, leading to reduced tumour control as treatment time increases [2, 3].

This retrospective observational study aimed to evaluate if the duration of specifically defined time intervals within the care pathway for patients with oral cancer treated with surgery and adjuvant radiotherapy affect survival and treatment response. Specific intervals assessed included:
1) Treatment package time (TPT - time from first surgical treatment and completion of radiotherapy)
2) Return to intended oncologic therapy (RIOT - time from completion of surgical treatment to commencement of radiotherapy)
3) Radiation interval (RI - time from start to completion of radiotherapy)

Method

This was a single centre, retrospective cohort study in a tertiary head and neck cancer centre in the UK comparing patients meeting the BAHNO standard [4] for TPT ≤100 days and those who exceeded this.
Cases were identified through custom searches of electronic health records.
We included any adult patient with a proven diagnosis of primary oral cavity squamous cell carcinoma, treated with curative intent by surgery with adjuvant radiotherapy or chemoradiotherapy between 2010 - 2021 (inclusive). We excluded cases with recurrent disease, those receiving palliative treatment, or who had distant metastases at the time of initial treatment.
The primary outcome was overall survival, measured as a time-to-event variable. We also evaluated disease-specific and disease-free survival, and recurrence (local, regional or distant).
We collected detailed sociodemographic, clinicopathological and treatment-related data to enable assessment of potential confounders. These were explored by univariate analysis, with significant covariates included in multivariate regression analysis.

Results

We identified 176 eligible patients treated within the evaluation period, of whom 111 were male. The mean (SD) age was 60 (11) years. The majority (n=135) of cases had advanced (AJCC stage IV) disease, and 90 required bony resection.
86 (49%) patients completed their surgical and adjuvant (chemo)radiotherapy treatment (TPT) within 100 days. The 5 year overall survival for patients with a TPT of ≤100 days was 56.4% compared with 47.5% for those exceeding this target, but this was not statistically significant on univariate analysis (log-rank test, p=0.17). The same trend was seen for disease-specific and disease-free survival.
However, a return to intended oncologic therapy (RIOT) interval of <42 days was found to be associated with statistically significantly improved 5 year disease-specific survival (94.7% vs 70.8%; log rank test, p=0.038), with a similar effect seen among patients who had no interruptions to radiotherapy vs. those with interruptions.

Conclusion

A shorter interval between surgical treatment and adjuvant (chemo)radiotherapy, alongside avoiding interruptions to radiotherapy was associated with improved disease-specific survival. While analysis is ongoing, with multivariate modelling to account for potential confounders, this finding suggests that efforts to improve recovery following surgery for oral cavity cancer may be important to facilitate earlier commencement of adjuvant treatment. Similarly, effort should be invested in proactively managing radiation toxicities, alongside other strategies to minimise interruptions to radiotherapy schedules.

Future work should prospectively evaluate the impact of care pathway time intervals on outcomes in oral cancer. This endeavour would likely require a multi-centred approach to achieve adequate power. Enhancing post-surgical recovery and optimising care pathways may be an important means of improving outcomes in oral cancer.

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Clinical outcomes of advanced head and neck cancer patients treated with immune checkpoint inhibitors at Mount Vernon Cancer Centre

Poster

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Aim

Since the introduction of immune checkpoint inhibitors in the management of recurrent or metastatic (R/M) head and neck squamous cell carcinoma (HNSCC), there has been an improvement in patient outcomes. Nivolumab, an anti–programmed death 1 (PD-1) monoclonal antibody, was approved in 2017, as a second-line treatment option, in patients with progressive R/M HNSCC disease on, or within 6 months after, platinum-based therapy, irrespective of tumour proportion score (TPS) based on the CheckMate -141 study. Pembrolizumab, an anti-PD-1 monoclonal antibody, was approved in the UK in 2020, as a first-line systemic option for patients with a combined PD-L1 positive score (CPS) of ≥1, following the KEYNOTE-048 trial. This study showed an overall survival (OS) benefit versus the standard EXTREME cetuximab-chemotherapy combination. Here, we provide real-world data on the overall clinical outcomes, including progression-free survival (PFS), and immune checkpoint inhibitor-related toxicity for both pembrolizumab and nivolumab for the treatment of R/M HNSCC.

Method

Retrospective data analysis of medical records of patients with R/M HNSCC at Mount Vernon, a tertiary Cancer Centre, was undertaken. Patients treated with either 1st line pembrolizumab or 2nd line Nivolumab between 14/03/2019 and 31/12/2023 were included. Data was analysed for clinical outcomes including progression-free survival (PFS), and immune checkpoint inhibitor-related toxicity (IRT). PFS evaluation incorporated radiological or clinical progression, or death, with appropriate statistical tests. IRT was graded using the Common Terminology Criteria for Adverse Events (CTCAE) system (grade 1= G1, grade 2 = G2, grade 3 = G3).

Results

Of 97 patients treated, 56(57.7%) received pembrolizumab and 41(42.3%) nivolumab. Median age was 63 years (range 30-88), and 77% of patients were male. Table 1 shows pembrolizumab PFS data.

23 (41.1%) patients experienced ≥ 1 IRTs with pembrolizumab: G1: n=6 (26%), G2: n=11(48%), G3: n=7 (30%). 10 (17.9%) patients received >12 months(m) pembrolizumab, IRT rate: 90%; G2 hypothyroidism (n=2), G3 colitis (n=1), G3 arthritis (n=2), G3 myositis (n=1), G1 dermatitis (n=3). 46 patients (82.1%) received <12m pembrolizumab, IRT rate: 28.3%.

The nivolumab cohort had a median PFS of 3.7m (0.7-55.3), with IRT in 41.5%, (n= 17). Median PFS in 24 (58.5%) patients with residual disease/local recurrence was 3.4m (0.8-55.3) vs. 4.3m (0.7-54.9) in the metastatic group (41.5%). 10 (24.4%) patients received >12m nivolumab (IRT rate: 80%; G2: hypothyroidism(n=3), colitis(n=1), hypophysitis(n=2), dermatitis(n=2). 31(75.6%) had <12m treatment (IRT rate: 22.6%). IRT discontinuation rate was 10% for pembrolizumab and 5% for nivolumab.

Conclusion

The real-world data from this retrospective cohort shows comparable efficacy to pembrolizumab in KEYNOTE-048 (median PFS 4.7 vs. 2.3m respectively), and nivolumab, in CheckMate-141 (median PFS 3.7 vs. 2.0m respectively).

Higher IRT rates were observed in our patients on long-term immune checkpoint inhibitors >12m, compared

to <12m duration, however most were G1 or G2, with G3 toxicities observed in the pembrolizumab group only. Hypothyroidism was the commonest IRT, with higher rates in this cohort compared with the KEYNOTE-048 and CheckMate-141 trials. Hypothyroidism may be related to previous radiotherapy treatment as noted in a recent R/M HNSCC immune checkpoint inhibitor safety evaluation study. Discontinuation rates due to toxicity were low which is reassuring.

Our analysis shows a similar safety profile and patient outcomes to a recent pooled analysis on use of pembrolizumab monotherapy and previously published immune checkpoint inhibitor studies.

Table 1: Pembrolizumab progression free survival data

	Subgroup	Median PFS (months) (range)
Pembrolizumab	All (n=56)	4.7 (0.6 – 35.5)
	PD-L1 CPS 1-19 (n=29) (51.8%)	4.7 (0.6 – 35.2)
	PD-L1 CPS ≥20 (n=27) (48.2%)	3.9 (1 – 35.5)
	Locally advanced disease (n=20) (35.7%)	5.7 (1 – 35.5)
	Metastatic disease (n=36) (64.3%)	3.7 (0.6 – 17.6)

Pfs pembro data- table.png

Clinical Predictive Models for Recurrence and Survival in Treated Laryngeal and Hypopharyngeal Cancer: A Systematic Review and Critical Analysis

Poster

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Aim

Laryngeal and hypopharyngeal squamous cell carcinomas (LSCC/HPSCC) are complex cancers that significantly impact patients' health and quality of life. Treatment decisions are difficult, balancing effectiveness with preserving functions like speech and swallowing. The TNM system, traditionally used for risk assessment and prognosis in LSCC/HPSCC, lacks patient-level predictions and doesn't account for treatment response. To improve prognostication, there's increasing interest in multivariable predictive models that include clinical, molecular, or radiomic data. These models aim to accurately predict treatment outcomes, aiding in personalized treatment. However, the success of these models depends on the quality of data and modelling methodology, affecting their performance and clinical adoption. This systematic review aims to perform a comprehensive evaluation of prognostic models used for outcomes prediction in adults treated for LSCC/HPSCC. Such a review has not been published before. We assessed the models' characteristics and the methodologies, as well as their performance, risk of bias and applicability.

Method

This systematic review (SR), part of the PETNECK 2 programme, was registered with PROSPERO (CRD42021248762) and followed PRISMA guidelines. Literature searches were conducted in MEDLINE, Embase, and IEEE databases from 2005 to September 2023. The search algorithm used comprehensive keyword combinations focusing on outcome prediction models for LSCC/HPSCC, without initial language or publication type restrictions. Expert reviewers screened titles and abstracts using a predefined Population, Index, Comparator, Outcomes, Timing and Setting (PICOTS) framework for the SR's scope and eligibility criteria. Eligible models should be externally validated multivariable models with at least one clinical predictor. The review extracted data on patient demographics, study design, variables, survival outcomes, and performance metrics. Risk of bias (RoB) was evaluated using PROBAST framework. Model discrimination, shown in forest plots, was categorized by outcome, with C-indices used for assessing discrimination. Due to variability in populations, follow-up durations, and metrics, quantitative pooling was not performed.

Results

The SR identified 11 models, reported in 16 studies (**Figure 1**). Eight models showed mostly good discrimination (C-indices 0.7–0.79), with only one excelling (C-index >0.9), and five models had weak or poor discrimination (C-indices/AUCs <0.7), **Figure 2**. External validations (EV) generally revealed reduced discrimination, suggesting poor generalisability and overfitting. Models combining radiomic scores achieved relatively better performances, but all clinical models outperformed the TNM system. Notably, models' performance in independent EV was notably lower. Moreover, models trained using data from population-based cancer registries, like SEER or NCDB, have shown poor performance. The SR only identified one model for predicting local control/recurrence with weak discrimination: AUC 0.67. This model was externally validated in four cohorts: AUC 0.62-0.72.

The included models also shown significant RoB, particularly in the analysis domain, **Figure 3**. Commonly identified methodological flaws include poor handling of missing data and suboptimal predictor selection, affecting model reliability and generalization.

Conclusion

Outcome predictive models for laryngeal and/or hypopharyngeal cancers hold promise but face challenges. This review highlights the shortcomings of currently available models, especially for biases and limitations, while emphasizing the need for rigorous independent evaluations. Improving models' development and ongoing evaluation are essential for effective patient care in head and neck cancer.

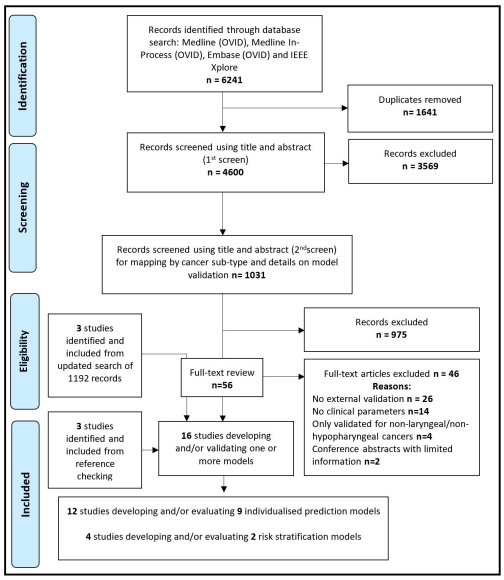

Figure 1: PRISMA flow diagram

Figure 1.jpg

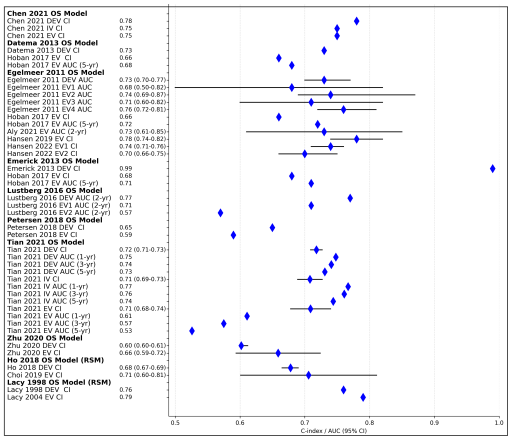

Figure 2.png

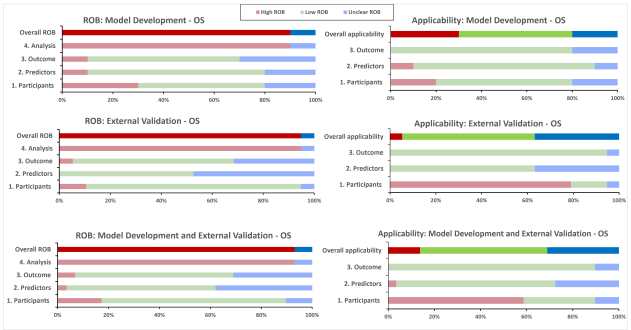

Figure 3.png

Clinicopathological Analysis of Aggressive Variant of Papillary Thyroid Cancer Utilising Data Search and Analytics Tool for Precision Patient Identification in Electronic Medical Records

Poster

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1. *Guy's & St Thomas' NHS Foundation Trust,* ***2.*** *King's College London*

Aim

Aggressive variants of papillary thyroid cancer (AVPTC), including tall cell (TCV), diffuse sclerosing (DSV), columnar cell (CCV), and hobnail (HV) variants, are rare and characterised by their aggressive behaviour. The absence of specific coding and evolving diagnostic criteria poses challenges in identifying patients with this histological diagnosis for data analysis. The study evaluates a data search and analytics tool, Elasticsearch, in extracting data from free-text electronic medical records (EMR) to identify AVPTC patients against a conventional clinician-led registry and reports the clinicopathological characteristics of these patients.

Method

A comprehensive search in EMR from 2017 to 2023 was conducted with a data search and analytics tool using keywords specific to each variant. The search results were manually reviewed to confirm the diagnosis through text snippet screening and EMR checking. Subsequently, the precision of patient identification was compared with that of the registry.

Results

With Elasticsearch, we identified 171 potential entries, with subsequent manual review confirming 52 TCV, 7 DSV, 4 CCV, and 4 HV patients. This pick-up rate surpassed the figures reported in our registry, which recorded 21 TCV, 5 DSV, 0 CCV, and 1 HV patient. The notable rise in CCV and HV patients highlights the historical underdiagnosis of these entities. Clinicopathological features of confirmed cases were then analysed.

Conclusion

The study showcases the efficacy of a data search and analytics tool in enhancing precision patient identification in the context of AVPTC. Furthermore, the potential extrapolation of use in identifying rare disease entities or specific clinicopathological features in free-text EMR, particularly for previously underreported and underdiagnosed entities lacking specific coding, highlights its broader applications in medical research and data analysis.

Co-designing a novel voice therapy intervention with tracheoesophageal speakers

Poster

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Aim

After laryngectomy, communication is negatively impacted (1,2). Surgical voice restoration is consistently shown to give the most favourable outcomes for quality of life and patient satisfaction when compared with other methods of communication post-laryngectomy (3). However, using and maintaining a voice prosthesis is a learning process that may be challenging to adjust to. There is an absence of therapeutic communication interventions for people with laryngectomy (PWL) (4) and limited literature on post-laryngectomy communication to contribute to development of communication interventions (5). To date PWL have not been included in research or intervention development as stakeholders. This study reports on the co-design of a novel tracheoesophageal voice therapy approach involving PWL and SLTs as partners.

Aims:

- To work in partnership with people with laryngectomy and SLTs to develop a tracheoesophageal voice therapy intervention
- To establish priorities and approaches for assessment and outcome measurement
- To design and test therapy activities, materials, resources

Method

Separate fortnightly workshops were held with nine PWL and ten SLTs. PWL from the Bengali community attended separate bilingual workshops to facilitate partnership working. The facilitators conveyed information between the groups in an iterative process to provide feedback and support reflections. Co-design methods included brainstorming, open discussion, Liberating Structures techniques and active trial of therapy approaches.

Results

Partnership working highlighted current challenges and desired outcomes for assessment protocols and service delivery models. Impairment based voice therapy approaches were tested, leading to the identification of potential therapy activities and targets, which could be supported by participation focussed interventions. Partners explored information provision, giving clarity on how information could be optimised through multi-modal delivery and greater inclusion of service users. Partners also identified needs for SLT training and barriers to delivery of tracheoesophageal voice therapy.

Conclusion

The study adds novel information on the views of PWL and SLTs about the processes of assessment, activities and information associated with tracheoesophageal voice therapy. This will inform next phase of development of a novel tracheoesophageal voice therapy intervention, which is acceptable and feasible to PWL.

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COMBINED FLUOROSCOPIC GUIDED ANTEGRADE-RETROGRADE RENDEZVOUS BALLOON DILATATION FOR COMPLETE OESOPHAGEAL OBSTRUCTION

Poster

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1. *University Hospitals Birmingham*

Aim

Dysphagia secondary to pharyngo-oesophageal stricture is a well-recognised sequelae after head and neck cancer treatment, affecting up to 40% of patients and leading to a significant impact on quality of life. The majority of strictures are partially occlusive and maintain a lumen. Such strictures are amenable to rigid endoscopy and standard antegrade dilatation techniques. However, patients may develop completely occlusive strictures, characterised by the total obliteration of the oesophageal lumen. In such instances, blind antegrade dilatation becomes inherently unsafe due to the heightened risk of perforation. These patients represent a challenging cohort to manage, as identifying a true oesophageal lumen may be difficult or even impossible.
We report a case of the successful application of combined fluoroscopic guided antegrade-retrograde recanalization to address the challenge posed by complete oesophageal lumen obliteration.

Method

A 63-year-old woman with a T3N0M0 post-cricoid squamous cell carcinoma underwent radical chemoradiotherapy, achieving a complete metabolic response on post-treatment PET-CT. However, she later experienced progressive dysphagia, ultimately leading to reliance on jejunostomy feeding. Diagnostic imaging revealed upper oesophageal post-treatment fibrosis with frank aspiration on video-fluoroscopy. Antegrade oesophageal dilatation was attempted, however this was unsuccessful due to complete luminal obliteration. A decision was made to proceed with a combined fluoroscopic guided antegrade-retrograde rendezvous dilatation procedure involving collaboration between ear, nose & throat (ENT), interventional radiology and upper gastrointestinal surgery. Under general anaesthesia, rigid oesophagoscopy determined the stricture's proximal extent, while retrograde endoscopy through a newly sited gastrostomy facilitated identification of the distal fibrotic segment. Fluoroscopy allowed assessment of the stricture length and orientation. A puncture was made through this fibrotic segment, and a fluoroscopically guided guidewire served as a conduit for subsequent antegrade balloon dilatation.

Results

No complications were observed following the procedure. The patient underwent two further standard antegrade dilatations over the next six weeks to ensure the maintenance of luminal patency. Significant functional improvement was observed, as evident by the patient's progression from a state of having to expectorate saliva, to the attainment of International Dysphagia Diet Standardisation Initiative (IDDSI) level 0 fluids and a level 4 puree diet.

Conclusion

Rendezvous recanalization is a reliable and safe method and should be considered when needing to re-establish luminal patency. The intervention underscores the importance of implementing a multidisciplinary approach to managing complete luminal obliteration. While recognising the inherent potential risks, given the lack of therapeutic alternatives, rendezvous recanalization is a valid option to improve dysphagia. It is noteworthy that individuals within this patient cohort often necessitate multiple subsequent dilatations as opposed to a

single intervention, an important consideration in treatment planning, when standard antegrade techniques are not possible.

Communication outcomes following functional salvage total laryngectomy.

Poster

Ms. Jane Dunton [1], ***Ms. Charlotte Leroy*** [1], ***Mr. Ricard Simo*** [1]

1. *Guy's & St Thomas' NHS Foundation Trust*

Aim

Functional salvage total laryngectomy (FSTL) may be offered to patients with severe laryngeal dysfunction following primary (chemo)radiotherapy for head and neck cancer, aiming to improve quality of life. Communication options post-total laryngectomy include surgical voice restoration (SVR), electrolarynx, oesophageal voice, mouthing, writing and use of communication apps. SVR should be offered to all eligible patients[1], and in the UK is the primary communication method for 71% of all people with total laryngectomy[2]. We reviewed communication outcomes for patients undergoing FSTL at our centre.

Method

All patients treated with FSTL at our tertiary cancer centre from 2009-2023 were included. Data were extracted from retrospective chart review at baseline, point of discharge from inpatient surgical admission, six and 12 months post-surgery. Demographics, airway status and primary mode of communication were recorded, along with any patient or surgical factors that may have impacted on suitability for SVR.

Results

Ten patients were included (see Table 1). At baseline, 50% (n=5) required tracheostomies due to upper airway obstruction; 30% (n=3) were unable to produce voice and were reliant on mouthing/writing. One patient (10%) underwent primary SVR at the time of surgery, and was using this functionally by the end of surgical admission. By this point, 30% (n=3) were using an electrolarynx effectively and 60% (n=6) were reliant on mouthing/writing/apps. Secondary SVR had been completed for a further 20% (n=2) by 6 months. By 12 months a total of 50% (n=5) had undergone SVR, though only 40% (n=4) were using this as primary mode of communication. One patient declined SVR, the remaining 40% (n=4) had not been offered SVR by 12 months post-surgery due to factors including prolonged healing and neopharyngeal stenosis. At 12 months, only one patient continued to use electrolarynx as primary mode of communication.

Conclusion

In this small single centre analysis, only 40% of patients undergoing FSTL were using SVR as their primary mode of communication by 12 months post-surgery, and half of patients relied on a combination of mouthing, writing and communication apps. While secondary SVR at a later date may be an option for some patients, the potential for a prolonged period without voice should be discussed and variability in outcome should be explained to patients considering FSTL. Further work as a multicentre study may identify factors that influence functional outcomes.

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Table 1: Patient characteristics

Patient Characteristics	**n**	**(%)**
Age at time of surgery		
Mean (years)	65.9	
Range	36 - 79	
Sex		
Female	3	(30)
Male	7	(70)
Time since initial treatment (estimated, specific dates not available for some patients)		
Mean (years)	7.5	
Range	4 months – 40 years	
Reconstruction type		
Antero-Lateral thigh free flap	7	(70)
Pectoralis major pedicled flap	1	(10)
No flap	1	(10)
Information not available	1	(10)

Table 1 patient characteristics.png

Figure 1: Primary communication mode over time

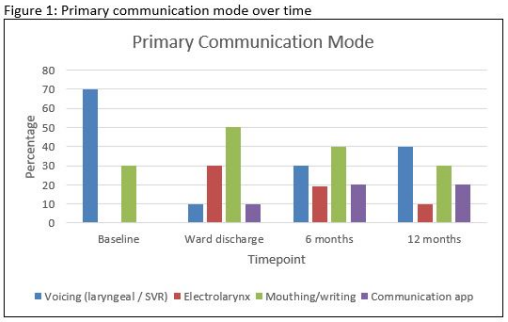


Figure 1 communication mode over time.jpg

Comparing Head & Neck Cancer patient clinical response to treatment with response of Head & Neck Cancer tissue maintained on a microfluidic device.

Poster

Mr. Jordan Greaves [1], ***Dr. Victoria Green*** [1], ***Prof. John Greenman*** [1], ***Mr. Winson Wong*** [2]

1. *Hull University,* ***2.*** *Hull and East Yorkshire Hospitals NHS Trust*

Aim

Head and Neck Cancer (HNC) remains a high burden disease, it is the 7th most prevalent cancer worldwide[1]. Despite the advent of new treatment technologies such as immunotherapy and IMRT (Intesity Modulated Radiotherapy) the survival rates have remained stubborn at ~50% 5-year survival rate[2]. Recent developments in tissue-on-chip technology may be able to break this stagnation and may potentially lead to personalised treatment.

This aim of this study was to measure how HNSCC (Head Neck Squamous Cell Carcinoma) tissue responds to varying treatment regimens while incubated for 72 hours with a tissue-on-chip device to see if the tissue response measured correlates to the patient outcome with the same treatment regimen. This was done by measuring treatment response in both tissue and effluent. Tissue response was measured using; IHC (Immunohistochemistry) for Ki67 and Cleaved-PARP and a H&E analysis. Effluent response was measured using Proteome Profiler™ and ELISA (IL-6, IL-8 & VEGF).

Method

Eleven HNSCC patients were recruited in total. The patient's tissue was run on a tissue-on-chip device for 72 hours, the device infused treatment solution at 2µL/min using a calibrated pressure driven pump (PHD ultra-Harvard) apparatus. Effluent was collected at 24 hours, 48 hours and 72 hours. Additionally, once the tissue was run in the device for 72 hours the tissue was frozen sectioned followed by IHC analysis and H&E analysis. The IHC and H&E analysis were quantified using Cell Profiler™. The effluent was analysed with ELISA and Proteome Profiler™. The correlation analysis will be done once patient treatment response has been reported.

The treatment regimens the HNSCC patient tissue received were;

- Control (No treatment).
- Cisplatin + 5 x 2Gy.
- Cetuximab.
- Nivolumab.
- 5 x 2Gy alone.
- Cisplatin + Cetuximab + Nivolumab.

Results

There was a trend of treated tissues having less proliferation than untreated (Ki67 % coverage was used to determine proliferation). However, this trend was not found to be statisically significant with a One-way ANOVA analysis *(*$F=0.9713$, $p=0.8930$). Cell death had a trend of treated tissues having more cell death than untreated (cleaved-PARP % coverage was used to determine cell death). This trend was found to be statisically significant with a One-way ANOVA analysis for at least two groups ($F=4.055$, $p=0.022$). The Tukey's multiple

comparison test found that the statistically significant different groups were Pre and Nivolumab (p=0.0014) and Pre and Cisplatin + Cetuximab + Nivolumab (p=0.0185).

For the effluent analysis, the maximum analytes present were 78 out of 105 screened for in one patient sample. There was a general pattern of less IL-6 & IL-8 expression in treated than untreated and more VEGF, both not statisically significant.

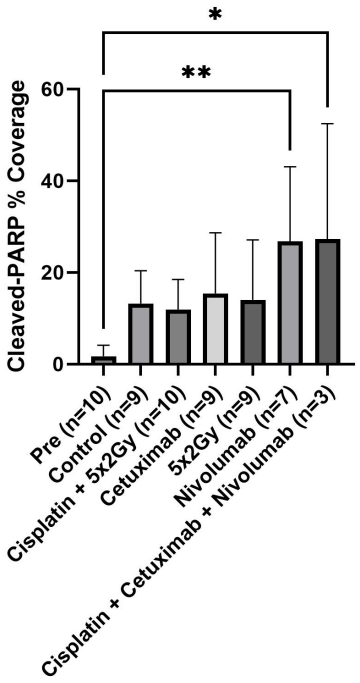
Conclusion

This study has demonstrated that HNC tissue can be successfully maintained on a tissue-on-chip device, as, there was no statisically significant difference between the tissue before run on tissue-on-chip and control run on tissue-on-chip. Additionally, there were trends among the treated tissue; generally less proliferation and more cell death with treatment. Interestingly the only statisically significant differences being between Pre and Nivolumab (p=0.0014) and Pre and Cisplatin + Cetuximab + Nivolumab (p=0.0185). There was also a very high intra-patient variability, which demonstrates the need for personalised treatment. Moreover, the effluent analysis found that IL-6 and IL-8 were secreted less following treatment whereas; VEGF is secreted more. A full ELISA and H&E analysis of the cohort is ongoing. Clinical correlations have not yet been made, they will be made once all data is collected.

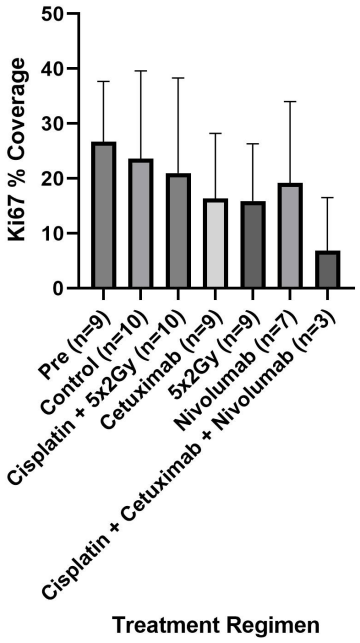
Reference (if applicable)

[1]Sung H, Ferlay J, Siegel R L*et al.* Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin* 2021; **71:** 209-249

[2]Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer.*Oral Oncol* 2009; **45:** 309-316



Cleaved-parp chemo and radio.jpg



Ki67 chemo and chemoradiotherapy analysis.jpg

Confocal laser microscopy for evaluation in Head and Neck Oncological Resections

Poster

Mr. Sam Morcom [1], ***Mr. Jean-Pierre Jeannon*** [1], ***Dr. Ann Sandison*** [1], ***Mr. Richard Oakley*** [2], ***Mr. Aleix Rovira*** [1], ***Mr. Alastair Fry*** [1], ***Dr. Shaamil Mohamed-Firoze*** [3], ***Dr. Harry Gregson-Williams*** [3], ***Dr. Lisette Collins*** [1], ***Mr. Asit Arora*** [1], ***Mr. Mustansir Alibhai*** [1]

1. *Guy's & St Thomas' NHS Foundation Trust,* ***2.*** *Guys and St Thomas NHS foundation trust,* ***3.*** *Kings College London*

Aim

Confocal laser scanning microscopy is a novel technology that provides rapid on site histological assessment of histopathological specimens. Intraoperative tissue evaluation is an invaluable adjunct reliant on frozen section analysis which has a number of limitations. Several specialties have adopted the technology to facilitate intra-operative decision-making including skin, breast and urological cancer surgery. Its role has not been evaluated in Head and Neck cancer surgery.

The Histolog Scanner (Saman Tree Medical, Switzerland), a CE-IVD confocal laser scanning microscope, provides a 40x50mm wide field of view, which allows rapid assessment (<1 minute) of a much larger field.

A proof of concept study was conducted to evaluate the application of confocal laser scanning microscopy in histopathological analysis of head and neck specimens.

Method

The Histolog Scanner was used to inspect surgical specimens prior to standard histopathological analysis. A fluorescent dye solution (Histolog Dip) was applied to the specimen surface for examination, before laser scanning. The laser of the scanner excites tissue fluorescence at a wavelength of 488 nm, with fluorescence emission collected above 500 nm. The generated image was then compared to the standard histopathological imaging.

Results

A total of 10 pathological specimens were processed through the Histolog Scanner, before proceeding to standard histopathological analysis in addition. These came from the following subsites: skin, salivary gland, oropharynx, oral cavity mucosa and lip. A number of histological subtypes were examined, including both mucosal keratinising and non-keratinising squamous cell carcinoma (SCC), cutaneous SCC and adenoid cystic carcinoma. A combination of both frozen section and larger specimens have been examined, showing close concordance to the gold standard pathology analysis.

Conclusion

This proof of concept study provides early evidence of the utility of the Histolog scanner in Head and Neck pathology, across a variety of anatomical subsites and histological types. It has the potential to allow greater intraoperative assessment of pathology, compared to the traditional use of frozen margin assessment, and may be able to improve clear margin rates at the time of primary surgery, reducing the need for re-operation or adjuvant therapy. Further investigation continues and will further refine the role of confocal laser scanning microscopy in the head and neck.

Creation of a community Fibreoptic Evaluation of Swallowing (FEES) service to enhance dysphagia rehabilitation post treatment for Head and Neck cancer (HNC)

Poster

Mrs. Kezia McFadyen [1], ***Ms. Ashlie Denison*** [1]

1. *Guys and St Thomas NHS foundation trust*

Aim

Dysphagia is one of the most common and debilitating consequences of HNC and its treatment affecting 60–75% of patients(1) with devastating implications for quality of life(2). FEES is an instrumental assessment of swallowing used by Speech and Language Therapists (SLT) to enhance dysphagia management and contributes significant cost benefits, efficiency and added value in terms of quality of patient care. The positive impact on patient outcomes…means that FEES should be considered an essential tool available to all SLT dysphagia services(3).

The South East London Community Head & Neck Team (CHANT) provide assessment and rehabilitation following H&N cancer treatment. Patients on the CHANT caseload previously could only access FEES via SLT services at Guys hospital. Appointment slots were limited resulting in prolonged wait times, increased reliance on videofluoroscopy and inequality in access for patients.

The aim of this project was to establish and evaluate a FEES service within CHANT.

Method

CHANT FEES completed between October 2022 and March 2023 were reviewed. Data was collected on number and location of assessments, time from referral to assessment, tumour location and staging, indications and outcomes. Videofluoroscopy wait time was also collected.

Additional staffing of 0.6WTE Band 7 SLT for 6months was secured and a dedicated CHANT FEES service commenced in October 2023 in collaboration with the Lewisham and Greenwich Home Enteral Nutrition team who own the FEES equipment. Patients were referred for FEES by their treating CHANT SLT based on clinical indication and completed responsively in pre-existing CHANT rehabilitation clinics across SE London. FEES was trialled innovatively as a biofeedback tool to enhance rehabilitation as well as used for assessment purposes.

The CHANT SLT team were trained in FEES interpretation and endoscopy.

Patient (Fig.1) and staff feedback forms were completed. The service was evaluated comparing 6months data pre and post service implementation.

Results

Data collection and analysis will be completed in March 2024 and full results will be presented.

Preliminary data shows a 1300% increase in number of assessments (n=28 vs n=2). 32%(n=9) completed <7 days from referral and 29%(n=8) completed as part of initial CHANT SLT appointments. 18%(n=5) had >1 FEES.

86%(n=24) completed at patients local clinic. 100% completed by CHANT SLT team eliminating reliance on Guys SLT team. Resultant reduction in wait time for Videofluoroscopy; (37.5days vs 14days). No current trends in tumour location/staging.

Increased variety of indications for FEES(Fig.2) with main indications to assess safety/guide oral intake (43%, n=12) and set therapy/inform rehab (25%,n=7).

Variety of outcomes(Fig.3), all resulting in multiple changes in management. Main outcomes were prescription of dysphagia therapy (46%,n=13) and increased patient understanding/biofeedback (325,n=9).

29%(n=8) patient feedback forms completed to date. Of these 100% reported FEES ‘really helpful’ and ‘improved understanding of how swallowing works’.

Conclusion

Initial data shows the benefit of FEES within the CHANT service with evidence of significant patient uptake, a variety of uses/outcomes within the rehabilitation setting and high levels of patient satisfaction. The current method of service delivery, although effective in delivering a FEES service, is not sustainable within current service structure upon fixed term post completion and therefore highlights the need for increased SLT staffing to maintain the service.

As only patients who were referred for FEES on clinical indication were included, a level of bias is present. Further work needs to be undertaken to establish optimum patient groups and timepoint for completion to enable FFES to become part of the routine CHANT pathway.

This service development has highlighted a clear gap in the evidence base evaluating the role of FEES in dysphagia rehabilitation. Funding has been sought to further research FEES as a biofeedback tool within the HNC population.

Reference (if applicable)

1. Malagelada JR, Bazzoli F, Boeckxstaens G, De Looze D, Fried M, Kahrilas,P et al. World Gastroenterology Organisation Global Guidelines Dysphagia — Global Guidelines and Cascades (2014) Update. J. Clinical Gastroenterol;49:370–8

2. Patterson, J.M., Lawton, M. Dysphagia Advances in Head and Neck Cancer. Curr Otorhinolaryngol Rep 11, 166–173 (2023). https://doi.org/10.1007/s40136-023-00445-6

3. Wallace S, McLaughlin C, Clayton J, Coffey M, Ellis J, Haag R, Howard A, Marks H, Zorko R. Fibreoptic Endoscopic evaluation of Swallowing (FEES): The role of speech and language therapy. London: Royal College of Speech and Language Therapists, Position paper. 2020

1. Overall, how was your experience of our service?

☐ Very Good	☐ Good	☐ Neither good nor poor	☐ Poor	☐ Very poor

2. Please tell us the main reason for your answer.

3. How helpful did you find the procedure?

☐ Really helpful	☐ Fairly helpful	☐ Somewhat helpful	☐ Slightly helpful	☐ Not helpful at all

4. In what way was it helpful? Please tick any/all that apply.

☐ Improved my understanding of how swallowing works	☐ Helped me to decide what to eat and drink
☐ Improved my understanding of the difficulties I am having	☐ Help motivate me to continue to complete my swallowing exercises
☐ Understand which techniques help my swallowing	☐ It wasn't helpful
☐ Understand the risks associated with eating and drinking	☐ Other:

5. Following the procedure how confident are you in understanding what is happening with your swallowing?

☐ Completely confident	☐ Fairly confident	☐ Somewhat confident	☐ Slightly confident	☐ Not confident at all

6. If a choice was given, where would you have preferred to have had this procedure?

☐ At a CHANT clinic in the community	☐ Guys Hospital	☐ Home

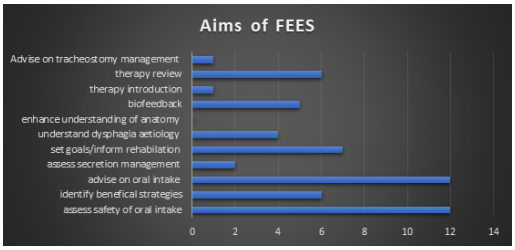
7. Would you consider having this procedure again if recommended by your Speech and Language Therapist?

☐ Yes	☐ Maybe	☐ No

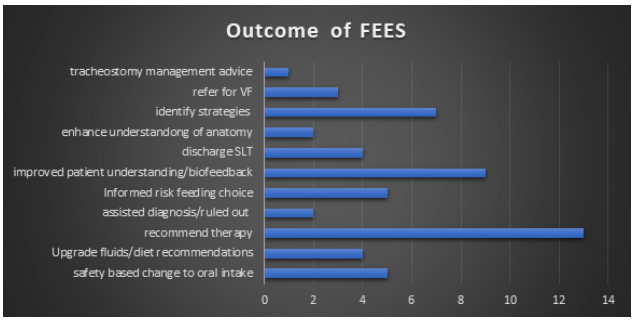
If no, why?

8. Any other comments/feedback about your experience of having the procedure?

Attachment 1.png



Attachment 2.png



Attachment 3.png

CT-derived radiomic markers independently predict survival in advanced laryngeal cancer: Results from a pilot study.

Poster

Mr. Amarkumar Rajgor [1], ***Dr. Christopher Kui*** [2], ***Dr. Andrew McQueen*** [2], ***Mr. Josh Cowley*** [3], ***Prof. Aileen Mill*** [3], ***Prof. Steven Rushton*** [3], ***Prof. Boguslaw Obara*** [3], ***Dr. Khaled Kallas*** [2], ***Dr. Theophile Bigirumurame*** [3], ***Mr. James o'Hara*** [2], ***Mr. David Hamilton*** [3]

1. *National Institute For Health & Care Research,* ***2.*** *The Newcastle Upon Tyne Hospitals NHS Foundation Trust,* ***3.*** *Newcastle University*

Aim

Laryngeal cancer affects 2400 new patients annually. Regrettably, half of these patients are diagnosed with advanced-stage disease, with survival rates of around 50-60%. Despite advancements in medical technology, survival outcomes for laryngeal cancer have stagnated over the past three decades. Recognizing the need for improvement, exploring novel approaches, particularly in the field of medical imaging, could substantially improve outcomes.

Medical imaging is crucial throughout the diagnostic process for laryngeal cancer. However, the valuable insights these images could provide into the tumour and its microenvironment are often overlooked. With innovative computational techniques, objective data and further detail can be extracted from these images, potentially uncovering a "radiological biomarker" that could revolutionize prognostication.

Therefore, this pilot study aims to identify CT-based radiomic features that may predict survival and enhance prognostication in advanced laryngeal cancer.

Method

Pre-biopsy contrast-enhanced CT scans were assembled from a retrospective cohort of 72 patients with advanced laryngeal cancers (T3-T4). Tumour segmentation was performed by two consultant radiologists using the LifeX platform. A LASSO-Cox regression model was employed to select two radiomic features: shape compacity (irregularity of tumour volume) and GLZLM_ZLNU (tumour heterogeneity). The prognostic potential of both features was explored via Cox-regression analysis. The cohort was additionally stratified to upper, middle, and lower terciles according to radiomic feature values for Kaplan-Meier analysis.

Results

Multivariable Cox-regression analyses determined that greater shape compacity (HR 2.89, 95% CI 1.40-5.93, p=0.004) and GLZLM_GLNU (HR 1.64, 95% CI 1.02-2.63, p=0.041) were significantly associated with worse 5-year disease-specific survival. Patients with the upper tercile of shape compacity values had poor 5-year disease-specific mortality (51% vs 76% [middle tercile] vs 83% [lower tercile], p=0.032), as was observed for GLZLM_GLNU (47% [upper tercile] vs 63% [middle tercile] vs 97% [lower tercile], p=0.0013). Cox regression models yielded a superior C-index when incorporating radiomic features (0.759) versus clinicopathological variables alone (0.655).

Conclusion

In this pilot, two radiomic features were identified as independent prognostic biomarkers for oncological outcome. This highlights the potential of radiomics and underscores the significant role that imaging could play in advancing research in laryngeal cancer.

To build upon these promising findings, a large, multi-centre prospective study is essential. In the future, the development of clinically relevant radiomics-based models may refine the management of advanced laryngeal

cancers.

Dietetic and pain interventions in teenage and young adult (TYA) patients undergoing Proton therapy for Nasopharyngeal Cancer

Poster

Mr. Mark Reed [1], ***Mrs. Lorna Wilson*** [1]

1. *The Christie NHS Foundation Trust*

Aim

Since 2018 the Christie NHS foundation trust has been treating patients who have been approved by the national proton beam therapy panel. As part of the routine commissioning, patients who are diagnosed with locally advance nasopharyngeal cancer and are a young age (<25 years old) have been treated with proton therapy due to dosimetry advantages for younger patients. This is a service evaluation of the pain requirements and dietetic interventions these patients have needed while having proton therapy treatment.

Method

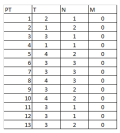
Retrospective analysis of patient notes from all patients who have been treated over the past 5 years at the christie. We will look at patient demographics, treatment, weight loss from baseline, grade of mucositis, need for enteral feeding, level of dietetic interventions and need for pain killers at the end of treatment.

Results

At the time of analysis 13 patient have completed treatment. Average age of 19 (16-26) years old, with at M:F ratio of 8:5. All patients were staged using AJCC 8th edition (Table 1). 12/13 patient received induction chemotherapy and all patients has concurrent chemotherapy. Total radiation dose ranged from 59.4Gy -70Gy over 6.5-7 weeks. 6/13 patients had baseline gastrostomy and by the end of treatment 10/13 patients had either a gastrostomy or nasogastric tube. We measured total weight loss as a percentage loss from there day 1 radiotherapy weight, Average weight loss was 4.3% (0%-13.7%). All patients required some level of pain control ranging from paracetamol alone to fentanyl patches, this was down to oral mucositis (table 2) in all cases. All patients were referred to the dietitian with interventions ranging from supplemental drinks (13/13) to admission for pump feeding (5/13). 1/13 required feeding tube long term (1 year+).

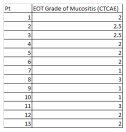
Conclusion

TYA patients undergoing radical chemo-proton therapy for Nasopharyngeal cancer require close monitoring and prompt referral for dietetic interventions due to high burden of oral mucositis, most patients will require strong pain killers to maintain oral intake during radiotherapy. Due to small sample size we cannot recommend prophylactic gastrostomies, this should be considered on a case by case basis depending on individual patients and local protocol.



PT	T	N	M
1	2	1	0
2	1	2	0
3	3	1	0
4	1	1	0
5	4	2	0
6	3	3	0
7	3	3	0
8	4	3	0
9	3	2	0
10	4	2	0
11	3	1	0
12	3	1	0
13	3	2	0

Table 1 bahno.png



Pt	EOT Grade of Mucositis (CTCAE)
1	2
2	2,5
3	2,5
4	2
5	2
6	2
7	1
8	3
9	1
10	3
11	3
12	2
13	2

Table 2 bahno.png

Dietetic patient satisfaction survey within a cohort of head and neck patients post completion of radiotherapy (+/-chemotherapy) at a regional oncology centre

Poster

Ms. Clare Roberts [1], ***Mrs. Lorna Wilson*** [1], ***Ms. Karen O'Hare*** [1]

1. *The Christie NHS Foundation Trust*

Aim

Head and neck patients receiving radiotherapy are seen by the dietitian throughout their treatment journey, in face-to-face consultations and via telephone consultations. The number of telephone consultations increased during and since COVID 19.

The aim is to evaluate the current head and neck dietetic outpatient service through a patient satisfaction survey using patient experience feedback.

To evaluate:

Frequency of consultations

Effectiveness of dietetic input

Consultation duration

Delivery of consultations

New initiatives to enhance patient experience

Method

A patient satisfaction survey was designed and handed out to patients during their final consultation. Completion of the survey was voluntary. The target sample number was 35 patients. Patients had the option to hand the survey back in on the day or to post back. Results were collated into a database and evaluated. Surveys were handed out between 2.9.22 and 12.9.23.

Results

35 surveys were completed and the results collated.

The results showed the following key themes:

Patients were reviewed between 4 and 8 times, with a mean of 6 times

Patients were happy with the timing of the dietetic reviews throughout their treatment pathway.

All patients found seeing a dietitian throughout treatment useful.

The majority of patients felt they always had enough time to discuss their needs.

Some patients would be amenable to video consultations, which may be something to explore in the future.

The current approach to telephone reviews is acceptable for most patients.

Additional comments in general were very positive and appreciative of the dietetic care they have received.

Patients felt that they were given all the information that they required, prior to starting their treatment.

Conclusion

The results of the patient satisfaction survey are very positive and do not highlight any specific areas for improvement. It does highlight the value of regular dietetic input for head and neck patients and the importance of the role of the dietitian within the MDT. The results of the patient experience will support the future business case for additional resources and developing the head and neck outpatient service.

Differences in Survival Outcomes between Superficial and Radical Parotidectomies for Stage III Cutaneous SCC [Single Centre Retrospective Case Review]

Poster

Mr. Peter Smith [1], ***Mr. John Biddlestone*** [2], ***Mr. Jeremy McMahon*** [2], ***Dr. Roseanna Morgan*** [2], ***Mr. Richard Locke*** [2]

1. *School of Medicine, Dentisty & Nursing, University of Glasgow, Glasgow,* ***2.*** *NHS Greater Glasgow and Clyde*

Aim

Head and neck cutaneous squamous cell carcinoma (cSCC) commonly metastasises through the parotid gland. The historical paradigm for treating parotid gland metastases has remained largely unchanged for the last 40 years: if functional pre-op, preserve the facial nerve intra-op. Positive pathological margins found after superficial parotidectomies are commonly treated with post-operative radiotherapy rather than further radical surgery. The aim of this study is to evaluate the oncological outcomes associated with superficial and radical parotidectomy for metastatic cutaneous SCC, focusing on overall survival, recurrence-free survival, and locoregional control.

Method

A retrospective search of all operative procedures involving parotidectomy in central Glasgow and Greater Clyde hospitals between 2015-2022 was performed using Centricity™ OPERA database using appropriate Clinical Classification Codes. Electronic Patient Record review was performed for identified patients. Inclusion criteria were: total or superficial parotidectomy to treat stage III cSCC of the head and neck. Exclusion applied was parotidectomy for a cause other than cSCC of the head and neck. The end point was 60 months of follow-up.
Data analyses were performed using RStudio. Cox proportional hazard, Kaplan Meier models, and pairwise comparisons were produced to compare the defined outcomes: overall survival (OS), recurrence-free survival (RFS), and locoregional recurrence (LRR). Additional multivariate analyses were performed to assess the impact of margin status, peri-neural invasion (PNI), Lymphovascular invasion (LVI), and extracapsuilar spread (ECS) on the respective outcomes.

Results

80 patients met the inclusion criteria: 51 underwent superficial parotidectomies; 29 underwent total parotidectomies. Of the superficial parotidectomies, 21 had involved margins (0mm), 9 had close deep margins (<1mm), 21 had clear margins (≥1mm).
For superficial parotidectomies, pairwise analysis showed overall survival was significantly different when comparing clear and involved margins (p=0.019). Cox-regression analysis showed OS and RFS, were associated with PNI (HR=2.5577; 95% CI:1.0208-6.409; p=0.0451, HR=4.23735; 95% CI:1.2307-14.589; p=0.0221, respectively). Margin status and ECS were significantly associated with LRR (p=0,0451, p=0.00759 respectively).
For radical parotidectomies, no variable held significant associations with any of the outcomes.
Comparing superficial and radical parotidectomies; patients showed that those who had involved margins post-superficial parotidectomy had significantly worse OS, RFS, and LRR than the radical parotidectomy group (p=0.0023, p=0.013, p=<0.0001 respectively, see figure 1&2). Those with clear or close margins post-superficial parotidectomy did not have significantly worse outcomes than the radical parotidectomy patients.

Conclusion

When solely considering superficial parotidectomies, PNI appears to be the strongest predictive factor for poor outcomes. However, both uni-variate, and multi-variate analysis show no significant relationship between the

variables recorded and the outcomes for the total parotidectomy group.
Patients who have undergone a superficial parotidectomy and have either clear or close (<1mm) margins, do not have worse outcomes compared to those who have undergone a radical parotidectomy for stage III cSCC. However, patients with positive deep margins post-superficial parotidectomy have worse overall survival, recurrence free survival, and locoregional recurrence than patients who have received a radical parotidectomy for metastatic cutaneous SCC. These data raise the question as to whether further radical surgery should be considered in patients with a positive deep margin following superficial parotidectomy.

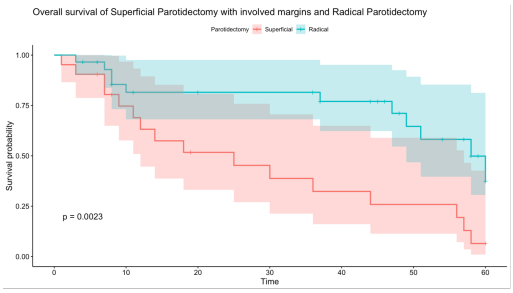


Figure 1.png

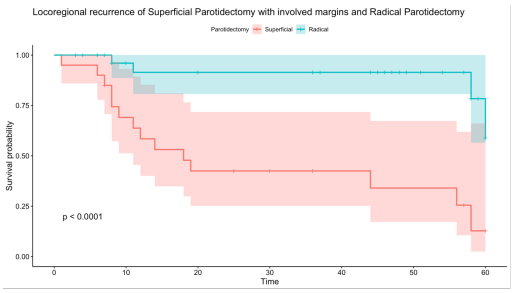


Figure 2.png

Do DrEaMs come true? Post-operative outcomes of Head and Neck patients on ERAS pathways

Poster

Ms. Ursula Mackie-Savage [1], ***Ms. Denise Flynn*** [1]

1. *University College London Hospital*

Aim

To determine whether there is a correlation between Head and Neck surgical patients DrEaMing (drinking, eating and mobilising within 24 hours of surgery) and a reduction in hospital length of stay (LoS).

Method

A retrospective analysis was performed of a cohort of 80 patients who had undergone either a laryngectomy or free flap procedure on an enhanced recovery (ERAS) pathway. Patients were divided into 'DrEaMing' and 'non-DrEaMing' groups and total hospital LoS was compared with the pre-ERAS average LoS.

Results

77% of patients on the ERAS pathways saw a reduction in LoS, regardless of DrEaMing status. 58% of patients 'DrEaMed' i.e. achieved eating, drinking and mobilising within 24 hours of surgery. Of patients who 'DrEaMed', 85% had a reduction in LoS, however, in the non-DrEaMing cohort, there was also a reduction in LoS 26% of the patients. DrEaMing post-operatively predicted reduced odds of prolonged LoS (odds ratio 3.27, p=0.01).

Conclusion

In this group of Head and Neck surgical patients, DrEaMing positively correlated with a reduction in LoS. However, a reduction in LoS was also observed for a proportion of the 'non-DrEaMing' group, which is likely to be attributed to optimisation of patient care through other elements of the ERAS pathways. More robust data from a larger cohort of patients is undoubtedly required, however, these results show promise that in achieving just three ERAS benchmarks, a reduction in LoS can still be achieved. Focusing on DrEaMs therefore, may be more viable to implement than full ERAS pathways, which are typically complex and multi-faceted.

Dysphagia as a late effect of head and neck cancer (HNC) treatment: A Scoping Review

Poster

Ms. Diane Sellstrom [1], ***Prof. Jo Patterson*** [2], ***Mr. James o'Hara*** [3], ***Prof. Tracy Finch*** [4], ***Prof. Catherine Haighton*** [4]

1. *New,* ***2.*** *Liverpool University,* ***3.*** *The Newcastle Upon Tyne Hospitals NHS Foundation Trust,* ***4.*** *Northumbria University*

Aim

Dysphagia can present as a late side effect of HNC treatment. However, there is no agreed definition of 'late' and clinicians are unable to predict who will be affected, when, how and what the trajectory of change may look like. Recent guidelines have suggested patients should continue under surveillance annually beyond the usual 5 years post-treatment. It is unclear if this should apply to all HNC patients and requires clarification to assist service planning and allocation of resources.

This scoping review aimed to identify and synthesise the available evidence concerning late-dysphagia with a view to highlighting gaps. Review questions included which patients are affected (tumour site, treatment received and other demographics), how dysphagia-related effects are measured and what the findings are. This abstract will focus only on the results relating to how late-dysphagia is measured due to the volume of data.

Method

A scoping review was conducted according to PRISMA-ScR guidelines. The following databases were searched between Nov-Dec 2022: PubMed, EMBASE, Scopus, CINAHL and Web of Science. Eligibility criteria included studies published after 1996, reporting late radiation-induced dysphagia (defined as >2yrs post-treatment). Clinical guidelines, opinion pieces, editorials and studies not available in English were excluded. The protocol is registered on the Open Science Framework. Results were synthesised narratively.

Results

Searches yielded 8744 records. Removing duplicates and screening for eligibility reduced the number of included studies to 39.

Three toxicity ratings were employed: RTOG (n=2), LENT-SOMA (n=2) and CTCAE (n=1). A range of clinical assessments or clinician-rated measures were used: VF (n=8), FEES (n=3), PSS NOD (n=3), EMG (n=3), FOIS (n=2), WST, HRM, RBHOMS, DSS (all n=1). Five patient-reported outcome measures (PROMs) were used: MDADI (n=6), EORTC (n=5), UW-QOL (n=4), SWAL-QOL (n=3), AusTOMS (n=1).

The following swallowing-related characteristics were reported: lower cranial neuropathy (n=3 studies); airway penetration/aspiration (n=6); rates of aspiration pneumonia (n=7); dietary texture restrictions (n=5); and late gastrostomy placement (n=5). Results from the PROMs were given in varying formats i.e. mean versus median; composite versus domain scores and collected at differing time-points with 13/17 repeating the measure over time.

Conclusion

Heterogeneity of selected articles led to difficulties in interpretation and analysis of the available evidence. Studies are using different time-points to classify a late effect. Few are collecting multi-dimensional assessments of dysphagia and the measures used varied across the studies. Instrumental assessment was most commonly used but reporting tools within these assessments was not consistent. Late-RAD requires further refinement in terms of definition and methods/timing of data collection.

Epidemiology and risk prediction modelling of head and neck cancer

Poster

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Aim

Head and Neck Cancer (HNC) incidence is on the rise, often diagnosed at late stage and associated with poor prognoses. Risk prediction tools have a potential role in improving HNC prevention and early detection.

Method

Informed by a review of existing models and the results of a Scottish cancer registry analysis, a clinical HNC risk prediction model with behavioural/demographic predictors was developed via multivariable logistic regression analyses in the IARC-ARCAGE European case-control study; and then externally validated in the UK Biobank cohort. Model performance was tested via discrimination and calibration metrics.

Results

The development dataset (HNC-cases=1926; controls=2043) model including sociodemographic, smoking, and alcohol variables had moderate discrimination, with an Area Under Curve (AUC) value of 0.75 (95%CI; 0.74-0.77), with good calibration. Validation dataset (participants=384,616; HNC-cases=1177) model had an AUC of 0.62 (95%CI; 0.61-0.64).

Conclusion

This HNC risk prediction model had moderate performance in the development population and acceptable performance in the validation dataset. Demographics and risk behaviours are strong predictors of HNC, and this model may be a helpful tool in primary dental care settings to promote prevention and determine recall intervals for dental examination. Future addition of HPV serology or genetic factors could further enhance individual risk prediction.

Evaluation of human oral, circulating and gut microbiome in head and neck cancer and pre-cancer in the West of Scotland

Poster

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Aim

The incidence of head and neck cancer (HNC) in Scotland has increased in the last 10 years, despite decreasing trends in the traditional risk factors, smoking and alcohol consumption. There is a growing recognition of a distinct cohort of younger, mostly female, non-smoking and non-drinking patients with head and neck cancer and pre-cancerous changes, which suggests an alternative aetiopathogenesis for this disease. While the role of endogenous microbiota in the development of other cancers has been well delineated, the role of the oral microbiome in head and neck carcinogenesis remains unclear. Recent research has identified differences in the microbiome, tied to socioeconomic position, lifestyle and diet, that may impact on the presentation of cancer in this population. This observational study aims to identify patterns of oral, circulatory and faecal microbiota diversity in head and neck cancer and dysplasia patients, with or without traditional risk factors, and the disease-free population.

Method

Patients with current or previous history of oral epithelial dysplasia or invasive squamous carcinoma are recruited from the Queen Elizabeth University Hospital, Glasgow. An oral salivary swab, venous blood sample and faecal sample are collected. A basic periodontal examination is performed to assess for presence of periodontal disease. Presence of microbial DNA in each sample is analysed via 16S rRNA gene sequencing, with alpha and beta diversity analyses, and taxonomic classification performed. Clinical information including tobacco and alcohol exposure, disease site and presence of periodontal disease is collected and correlated with analysis of microbial data. Comparison is made with an established cohort of age and sex matched disease-free individuals, with and without history of risk factor exposure.

Results

Ninety-seven patients have been recruited to date. Samples from each head and neck cancer patient were grouped in order to observed direct comparison of the microbiota in all three environments in these matched samples. For most samples, the 25 most abundant taxa in the blood and gut were reflective of each other, but the oral microbiota had vastly different comparison compared to their matched samples. This suggests that blood could be a better biomarker for gut dysbiosis than the oral microbiota, which had previously long been accepted. Metadata analysis has shown prevalence of dysbiosis in hypertension, diabetes, alcohol consumption and ischaemic heart disease. This data is reflective of cancer as a disease of accelerated ageing and epigenetic dysregulation, including choline and betaine microbial metabolism. Further analysis assessing differences in microbiota between cancer patients with traditional risk factors and the non-smoker, non-drinker oral cancer groups will be presented.

Conclusion

The non-smoking and non-drinking population of head and neck cancer patients is becoming an increasingly distinct and significant group. Our data provide novel comparison of the microbiota in those patients with and without traditional risk factors for oral dysplasia and squamous cell carcinoma. The prospect of better

understanding the role of the human microbiome in the head and neck cancer and precancer population leads to intriguing therapeutic opportunities.

Evaluation of Prognostic Factors in Surgically Managed T4b Oral Squamous Cell Carcinoma: A Systematic Review and Narrative Synthesis

Poster

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Aim

According to the American Joint Committee on Cancer classification, OSCC T4b cancers are defined as tumours which invade any or all of the following areas: the masticator space; the skull base; the prevertebral fascia; and the internal carotid artery. This is a very heterogenous group of tumours, which do not have equal tumour resectability, both in terms of technical difficulty and likely survival outcomes. Although tumours which invade the skull base, and those which encase the internal carotid artery are truly unresectable, cases with masticator space invasion only are not. Numerous studies have demonstrated comparable survival outcomes between T4a and T4b masticator space tumours. The review aims to identify prognostic factors which may have an effect on the survival of surgically treated T4b tumours limited to the masticator space. This in turn may help in selecting patients who will benefit from radical surgical treatment within this patient cohort.

Method

A systematic review protocol was registered with PROSPERO and reported in accordance with the Preferred Reporting for Items for Systematic Reviews and Meta-Analyses (PRISMA). Comprehensive electronic search strategies between January 2000 to January 2023 were developed by a librarian. Studies were screened by two independent reviewers.

Results

Eight articles were eligible for inclusion within the review. On multivariate analysis (MVA), nodal spread exhibited unfavorable disease-free survival (DFS) and overall survival (OS) in five studies. On univariate analysis (UVA), perineural invasion, tumour differentiation and extranodal extension were found to be important prognostic factors for both DFS and OS in five, three and two studies, respectively. On UVA, two studies revealed unfavorable survival outcomes for supra-notch disease, and one study indicated the same for lower disease in both DFS and OS. On MVA, two studies identified bone invasion as a significant adverse prognostic factor for OS, and one study reported the same for DFS. On MVA, poor survival outcomes in terms of OS were observed in one study for lymphovascular invasion, while DFS was statistically significant only on UVA in two studies. Skin invasion was not found to be an important prognostic factor within the included studies.

Conclusion

Anatomical tumour location, perineural invasion, bone involvement, tumour differentiation and nodal metastasis were shown to impact survival outcomes of patients with T4b tumours limited to the masticator space. If further differences in survival outcomes are highlighted in future high-quality studies, a revaluation of the current staging system, and management of this patient cohort might be warranted.

Exploring the acceptability and feasibility of an exercise and nutrition intervention for head and neck patients receiving chemoradiotherapy

Poster

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Aim

Patients undergoing chemoradiotherapy for head and neck cancer (HNC) suffer significant muscle mass loss during and after treatment. We hypothesise that this muscle mass loss may impact on cancer-related fatigue and quality-of-life (QoL) following treatment. The treatment period for many patients is seen as a difficult process involving many hospital visits, potentially making intervention to improve outcomes challenging.

We aimed to explore the acceptability and feasibility, from both a patients' and healthcare professionals' (HCPs) perspective, of an exercise (personalised at home exercise plan) and nutritional intervention (protein supplements) delivered to patients who are receiving chemoradiotherapy with the aim of preventing muscle loss, reducing fatigue and improving QoL.

Method

We undertook stakeholder and PPI engagement work. Three focus groups; (1. dieticians (n=2) and speech and language therapists (n=3), 2. Macmillan nurses (n=4), and 3. HNC survivors (n=2)) were held to discuss acceptability and feasibility of the potential intervention. Two in-person sessions were undertaken involving HNC patients to gather opinions on light exercise and protein supplements. The first session include those who were post-treatment (n=5), and the second those on active treatment (n=3). Patients tasted a proposed protein supplement and viewed exercises on a web-app (PhysiApp). They provided feedback on two QoL questionnaires (FACT-HN & EORTC), took home a login for the exercise web-app, a TheraBand, and a feedback form. All patient participants received a gift voucher as compensation for their time.

Results

Both patients and HCPs were in favour of exercise support and protein supplementation during chemoradiation. Patients at all stages of treatment saw the benefit and felt that they would have been happy to be enrolled had this intervention been offered to them. Those currently undergoing treatment felt that it was important that they would be approached prior to starting treatment as they would not be as fatigued at that point and therefore more willing to engage.

The exercise and nutritional components were both viewed as acceptable, although the exercise component was most important to patients. They liked the ability for this to be tailored to their needs. They considered that there was an unmet need around information on what exercise they could undertake during treatment

All HCPs felt that exercise was something which, if found to make a difference, could easily be incorporated into their everyday patient management.

Conclusion

There is often hesitation about undertaking PPIE with cancer patients during active treatment. This exploratory work has shown patients will engage with this. It also indicates that both HCPs and patients see addressing muscle loss among those receiving chemoradiotherapy as important, and that intervention with personalised

home-based exercise and protein supplementation is deemed acceptable and feasible.

Factors Influencing Quality of Life (QoL) and Functional Outcomes in Laryngeal Cancer – An Analysis of the National Head and Neck 5000 (HN5000) Cohort

Poster

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Aim

In recent decades, organ-preservative strategies such as combination chemoradiotherapy has become increasingly utilised as an alternative to laryngectomy in the treatment of advanced laryngeal cancer There is an ongoing debate regarding the relative merits for survival and quality of life (QoL) benefits between surgical and non-surgical treatments[1]. For many patients, quality of life outcomes impact treatment choice as much as, or sometimes more, than survival estimates[2]. However, the literature provides limited evidence on QoL determinants for laryngeal cancer and, especially, on QoL comparisons between different treatment modalities, especially outside of clinical trials.

We aimed to identify for factors that influence laryngeal cancer patients' overall QoL outcomes and functional outcomes, with a particular focus on speech and swallowing, as well as to compare these outcomes in patients treated with and without surgery.

Method

The HN5000 cohort is a national multicentre longitudinal cohort study in the United Kingdom[3], and its database was accessed for this study. Baseline, 4-month and 1-year follow-up data of patients with laryngeal cancers were retrieved for analysis. This included patient demographics, disease characteristics, treatment strategies and modalities, baseline (pre-treatment), 4-month and 1-year patient-reported psychosocial and QoL outcomes. The psychosocial questionnaire used was the Hospital Anxiety and Depression Scale (HADS)[4]. Two QoL questionnaires used were the European Organisation for Research and Treatment of Cancer Core Quality of Life questionnaire (EORTC QLQ-C30)[5] and the EORTC disease-specific Head and Neck Cancer Module (EORTC QLQ-HN35)[6]. Additional analyses were performed on functional subscales relating to swallowing and speech outcomes. Multiple regression models were used to identify factors significantly influencing 1-year QoL and functional outcomes, and whether there were significant differences between patients receiving surgery and non-surgery treatments.

Results

827 laryngeal cancer patients with a mean age of 65.2 (25-95) were included, of whom 585 (70.7%) had early and 242 (29.2%) had advanced stage tumours. 241 (29.1%) patients received primary surgery while 586 (70.9%) patients received non-surgery-based treatments.

Baseline co-morbidities (p=0.02) and baseline QoL scores (P<0.001) were significant predictors of overall QoL at 12-months. QoL did not differ by whether the patient had surgery or non-surgical treatment (p=0.66).

As for swallowing and speech at 12-months, significant predictors included age, baseline tumour stage, baseline functioning in these domains, and treatments received. Surgical-based treatments favourably associated with 12-month swallowing outcomes (p=0.042) while non-surgical-based treatments were associated with favourable 12-month speech outcomes (p=0.02).

Baseline depression score was an additional statistically significant predictor of 12-month QoL (p=0.005) and speech (p=0.004) outcomes.

Conclusion

Laryngeal cancer and its treatment pose significant impacts on patient's QoL. Our analysis showed that QoL outcomes post-treatment are dependent on baseline QoL. Additionally, we demonstrated that depression and speech and swallowing functioning at pre-treatment are important determinants. This suggests that support from MDT members with these early in the cancer journey may help optimise patients' post-treatment QoL outcomes.

Our study also showed that functional outcomes such as speech and swallowing were influenced by the treatment strategies employed. The shared decision-making process regarding treatment options should therefore consider the complex interplay between survival benefits and patients' baseline QoL and functional levels.

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Factors that inform individual decision-making and decisional control in low-risk thyroid cancer: triangulation of qualitative data from patients and healthcare professionals.

Poster

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Aim

Over-diagnosis and -treatment of differentiated thyroid cancer has become a global health issue. Supported by multiple international guidelines, patients are now required to make a decision between a thyroid lobectomy and a total thyroidectomy. Previous studies have revealed that there is a serious disconnect between patients and clinicians during decision-making for the management of low-risk thyroid cancer. While patients were unsatisfied with the amount and type of information they received, clinicians also expressed difficulty in tailoring information to meet individual patient's needs. One intervention that can facilitate shared decision-making and improve decision quality is a patient decision aid. This study aimed to explore and triangulate patients' and healthcare professionals' perceptions of key information in shaping individualized decision-making to inform the development of a thyroid cancer patient decision aid. This study also investigated the power dynamic between patients and the providers, and the role of MDT recommendation in treatment decision-making.

Method

In-depth semi-structured interviews were employed to collect data from patients (n=10), consultant thyroid surgeons (n=4), and thyroid cancer specialist nurses (n=2) to understand the current treatment decision-making process on the surgical extension of low-risk differentiated thyroid carcinoma. Purposive sampling was used for participant recruitment and prospective data saturation calculation by Guest et al (2020) was used to ascertain the final sample size. Data was handled using qualitative software QSR NVivo 12®. A combination of deductive and inductive analysis was used following the framework method. Intercoder reliability was performed by 2 independent coders and achieved 95% of intercoder agreement.

Results

Three key factors were identified that informed the patient's treatment decision-making: 1) whether the patient needs a second operation over a short time; 2) the need to preserve the thyroid gland and avoid taking long-term thyroid hormone replacement medication; and 3) the patient's ability to accept the risk of cancer recurrence associated with the treatment. Treatment decision control was also explored. Although most of the patients felt they were in control of decision-making, the providers' recommendations alone could influence the final treatment decision despite being informed of the pros and cons of treatment options. Half of the providers were supportive of patients making their own decisions. The other half of the providers feared multiple treatment options would worsen patients' anxiety, and the thyroid cancer MDT recommendation should take the lead in decision-making.

Conclusion

The traditional, paternalistic paradigm of healthcare delivery is rapidly disappearing, with transformation emphasising shared decision-making centred on patients' values, needs, and preferences. This study uniquely contributes triangulated findings from the patients and healthcare providers, informing the content and design for a thyroid cancer-specific patient decision aid, which will empower and educate patients to become more proactive in decision-making and relieve pressure from the providers in a busy clinic. MDT meetings are

considered best practice in management and decision-making for cancer patients worldwide. However, most discussions tend to debate the 'best' treatment for a patient without taking into account patients' psychosocial information and their perspective on treatment [Hamilton] and, therefore, may represent a barrier to the delivery of shared decision-making. When multiple treatment options with similar oncological outcomes exist, patients' values should drive treatment decisions, and MDT discussion should allow flexibility and support individualised decision-making.

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Frailty and the Survival Outcomes of Patients with Laryngeal Squamous Cell Cancer (LSCC)

Poster

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Aim

Frailty can be defined as a syndrome of decreased physiologic reserve which increases the risk of adverse outcomes[1]. Within the head and neck cancer population, frailty is a common finding[2] and has been shown to lead to increased morbidity and mortality[2,3,4]. Using the Modified Five Item Frailty Index (mFI-5), a tool which has been validated for measuring frailty in cancer surgery patients, this study aimed to examine the association between frailty and survival outcomes in patients with LSCC.

The primary outcomes of this study were the impact of frailty on overall and disease-specific survival in patients with LSCC and if this differed between patients who were treated with curative or palliative intent. Secondary outcomes were the impact of frailty on survival from LSCC adjusted for dependence at surgery (WHO PS ≥ 2).

Method

Retrospective data collection was performed from electronic records on patients in the West of Scotland diagnosed with LSCC between 2014-2020, which allowed for minimum three years follow-up. Frailty was measured using the mFI-5 and is based on five variables; congestive heart failure, diabetes, COPD or pneumonia, medicated hypertension, and dependence at surgery (defined as WHO performance status (PS) ≥ 2). A patient's mFI-5 score is calculated by the number of variables present divided by five. Frailty was categorised according to mFI-5 score as 0.0 = not frail, 0.2 = moderately frail and ≥0.4 = severely frail. All statistical analysis was performed using the Jamovi software, version 2.4.8. A Mann-Whitney U test or ANOVA was performed to assess for differences in means between various groups. Univariate survival analysis assessed overall survival time based on mFI-5 and multivariate survival analysis compared the effect of mFI-5 on survival against other variables.

Results

867 patients were included in the study. 78% (n=676) of patients were deemed frail, with a mFI-5 score of 0.2 or higher. Median survival for 'not frail' patients was 78 months, 'moderately frail' was 63 months and 'severely frail' was 23 months. Palliative treatment group had worse overall survival outcomes in all three frailty categories compared to curative (hazard ratio (HR) of 7.96, p<0.001). 38.7% (n=329) of patients died as a direct result of laryngeal cancer. Patients who died from laryngeal cancer had a mean mFI-5 of 0.3 (SD 0.18), compared to patients alive at end of study with 0.19 (SD 0.16) (p<0.001). Multivariate analysis shows patients with WHO PS ≥ 2 and any frailty had worse survival than those with WHO PS < 2. Cox proportional hazards regression indicates stronger association between WHO PS ≥ 2 and overall survival (HR 3.09, p<0.001) than mFI-5 score (HR 1.39, p<0.281).

Conclusion

This study has demonstrated that frailty as delineated by the mFI-5 is extremely common in patients with LSCC. Severe frailty leads to worse mortality and survival outcomes for patients with LSCC. Unsurprisingly, those with palliative treatment intention have poorer survival outcomes and are frailer than patients identified for curative treatment. Patients who died as a direct result of laryngeal cancer were frailer than those who died from other causes or were still alive at the end of the study. A further finding is that the functional component of the mFI-5 (defined as WHO PS ≥ 2) is closely associated, and perhaps more so than mFI-5, with mortality in

frail patients. The mFI-5 can identify frail LSCC patients and may be a useful measure of frailty for the MDT but its' usefulness in predicting morbidity and complications in the post-operative period for LSCC is an area which requires further research.

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Free flap reconstruction for peri-ocular tumours: A UK and Australian based series and reconstructive algorithm.

Poster

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Aim

Meticulous surgical planning is required in reconstruction of defects following peri-ocular tumour resection. Reconstructive aims include early recovery and discharge, prosthetic rehabilitation, and timely commencement of adjuvant treatment including radiotherapy. Obliteration of dead space and closure of facial sinuses including the nasal cavity to avoid fistulas and secondary infections is imperative. This series aims to highlight our multi-centre approach to reconstruction of exenteration defects.

Method

Data was prospectively collected for free flap reconstruction for peri-ocular tumour resection between 2010 and 2023 at Guy's Hospital (UK) and the Royal Adelaide Hospital (Australia). Patient data relating to demographics, flap characteristics, pathology, complications, reconstructive and patient survival outcomes were analysed.

Results

86 free flaps were undertaken on 84 patients. Most underwent extended orbital exenteration (n=38), followed by standard exenteration (n=25), globe-preserving exenteration (n=7) and hemifacial defects (n=5). The commonest pathology was SCC (n=44). Reconstruction of exenteration defects was most commonly with anterolateral thigh (ALT) free flaps (n=39), followed by radial forearm flap (RFF) (n=15). Chimeric/muscle flaps (ALT/vastus lateralis or rectus abdominis) were used for extended exenterations. For globe preserving exenteration, fasciocutaneous flaps were used: ALT, medial sural artery perforator, RFF, and ulnar forearm flaps. The most utilised recipient vessels were superficial temporal artery and vein followed by the facial vessels. Seven patients had complications which included two flap failures, intracerebral abscess, fistulae, infection, and partial flap necrosis.

Conclusion

Our series highlights our combined reconstructive algorithm and the diverse reconstructive approaches which can be employed in peri-ocular reconstruction. A combined multidisciplinary team including ENT, Plastic Surgeons and Oculoplastic Surgeons as well as maxillofacial prosthetics enable optimal pre and post operative management of these patients.

Frozen section analysis in detection of occult metastasis in sentinel nodes from oral squamous cell carcinoma: A Systematic review and meta-analysis

Poster

Mr. Munir Abukhder [1], ***Dr. Panagiotis Vrakas*** [1], ***Dr. Selvam Thavaraj*** [2], ***Prof. Mark McGurk*** [1], ***Mr. Axel Sahovaler*** [1], ***Ms. Clare Schilling*** [1]

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Aim

Sentinel node biopsy (SNB) is an accurate surgical staging test for occult metastasis in oral squamous cell cancer (OSCC), however there is a wait of 4-10 days to obtain results of serial step sectioning (SSS) analysis requiring staged completion neck dissection in the case of a positive result. On-table frozen section (FS) sentinel node analysis offers a potential one-stage analysis and treatment, although the accuracy of this technique has not been fully explored. To evaluate the accuracy of FS analysis in the identification of occult metastasis in sentinel nodes from patients with cT1-T2 N0 OSCC.

Method

A systematic review of cT1-T2 N0 OSCC patients undergoing SNB with FS analysis. Protocol registered with PROSPERO and reported in accordance with the Preferred Reporting for Items for Systematic Reviews and Meta-Analyses (PRISMA). Comprehensive electronic search strategies between January 2000 to January 2023 were developed by a librarian. Studies were screened by two independent reviewers.

Results

Seventeen articles met the eligibility criteria identifying 878 patients that underwent intraoperative FS analysis of sentinel nodes, in most cases confirmatory SSS was also performed on the remaining nodal tissue. Overall, occult metastasis was found in 30% of patients (263/878). Of the 263 patients with cervical nodal involvement, frozen section analysis was able to identify 65.7% (n=173). Following the completion of SSS, an additional 90 positive results were identified, leading to 47 patients undergoing staged completion neck dissection. Pooled sensitivity of FS was 0.711; CI [0.6, 0.802], diagnostic odds ratio was 110, and false negative rate was 34.2%.

Conclusion

Intraoperative FS analysis showed a reasonable sensitivity, diagnosing 65.7% of occult metastasis. However, there was still a significant proportion of positive results detected on subsequent SSS, suggesting FS is not sensitive enough as a sole technique. In many studies it was unclear how much of the sentinel node was subsequently available for histopathological analysis raising the possibility that very small metastatic deposits could be missed. On-table diagnosis is advantageous for the SNB pathway and non-destructive analysis such as whole node imaging may improve on the result shown by frozen section.

Functional outcomes following partial, hemi- and (sub-)total glossectomy surgery with flap reconstruction: a single centre experience.

Poster

Mrs. Kate Baker [1], ***Ms. Grainne Brady*** [1], ***Mr. Francesco Riva*** [1], ***Prof. Justin Roe*** [1]

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Aim

Glossectomy surgery can have a significant impact on speech intelligibility, swallowing and quality of life (Dziegielewski et al, 2012). Speech and Language Therapists (SLTs) are regarded as key members of the head and neck cancer (HNC) multidisciplinary team (MDT) (Schache et al, 2020). They have a critical role in pre-surgical counselling and preparing patients for expected functional outcomes. The purpose of this service evaluation was to report acute and short-term speech, swallowing and other functional outcomes following glossectomy surgery with free flap reconstruction.

Method

Data were collected retrospectively from the electronic records of all patients who underwent glossectomy with free flap reconstruction at our centre between January 2020 and December 2022. The sample included patients who underwent partial (PG), hemi (HG) and (sub-)total (TG) glossectomy. Patients were allocated to the PG, HG or TG group, according to the size of excision as documented in the operative note. Patient demographics (age and gender), nasogastric tube (NGT) and gastrostomy tube dependency (G-tube), tracheostomy dependency and Performance Status Scale for Head and Neck Cancer patients (PSS-HN) Normalcy of Diet (NoD) and Understandability of Speech (UoS) scores were investigated at baseline (pre-op), point of hospital discharge and three-months post-operatively (see table 1). Hospital length of stay (LoS) was also examined.

Results

The sample included 28 patients (14 male, 14 female). Six underwent PG, 11 HG and 11 TG. Mean age was 57 years (range 28-80). A prophylactic G-tube was placed in 29%(n=8). All others had an NGT placed intraoperatively, with 45%(n=9) requiring conversion to G-tube prior to discharge. Median days to NGT removal was 13 (range 1-30). Tracheostomy was required intraoperatively in 54%(n=15). Median days to decannulation was 10 (range 3-29). All patients were having oral intake prior to surgery. At discharge, 21%(n=6) were nil by mouth and 12.5%(n=3) at 3 months. Liquids only (PSS-HN NoD 10-20) were tolerated by 19%(n=5) at baseline, 29%(n=8) at discharge, 46%(n=11) at 3 months. At least pureed food was managed by 81%(n=22) at baseline, 50%(n=14) at discharge, 42%(n=10) at 3 months. Speech was always/mostly understandable in 85.5%(n=24) patients pre-op, 32%(n=8) at discharge and 65%(n=15) at 3 months. Median LoS was 16 days (range 7-49).

Conclusion

Our findings confirm the significant impact glossectomy can have on speech and swallowing. Unsurprisingly, we saw a trend of TG having a greater effect on swallowing and speech than PG and HG. However, little difference in swallowing (PSS-HN NoD) was seen between PG and HG post-surgery. The lack of agreement on a definition of PG or HG is a limitation of both this project and the wider literature. Patients were not separated into those who had post-operative radiotherapy (PORT) versus those who did not, which may have influenced the results at 3 months. Future studies would benefit from a larger sample size, analysing the impact of PORT, inclusion of patient-reported outcome measures and evaluation of functional outcomes at 6 and 12 months.

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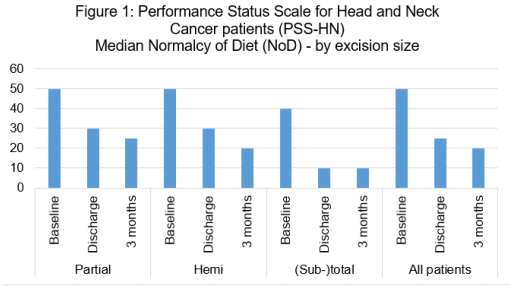
Schache A, Kerawala C, Ahmed O, Brennan PA, Cook F, Garrett M, et al. British Association of Head and Neck Oncologists (BAHNO) standards 2020. J Oral Pathology Medicine [Internet]. 2021 [cited 2023 Sep 30];50(3):262–73. Available from: https://onlinelibrary.wiley.com/doi/10.1111/jop.13161

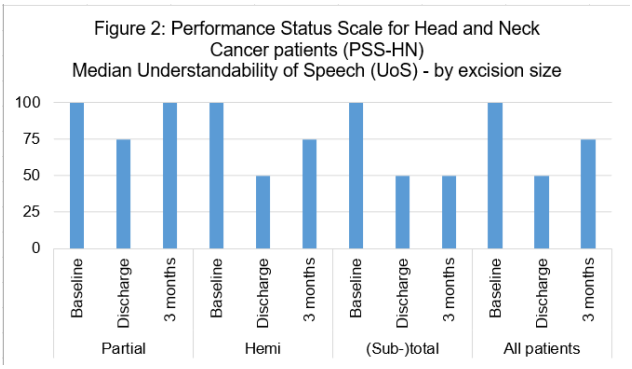
Table 1: Performance Status Scale for Head and Neck Cancer patients (PSS-HN) Normalcy of Diet (NoD) and Understandability of Speech (UoS) subscales (List et al 1990)

Performance Status Scale for Head and Neck Cancer patients (PSS-HN)	
Normalcy of diet	
100	Full diet (no restrictions)
90	Full diet (liquid assist)
80	All meats
70	Carrots, celery
60	Dry bread and crackers
50	Soft, chewable foods
40	Soft foods requiring no chewing
30	Pureed foods
20	Warm liquids
10	Cold liquids
0	Non-oral feeding
Understandability of speech	
100	Always understandable
75	Understandable most of the time; occasional repetition required
50	Usually understandable; face-to-face contact necessary
25	Difficult to understand
0	Never understandable; may use written communication

Bahno 1.png



Bahno 2.png



Bahno 3.png

Fusobacterium nucleatum is cytotoxic to oral cavity squamous cell carcinoma and likely exerts its effect via a contact-independent mechanism

Poster

Dr. Anjali Chander [1], ***Dr. Jacopo Iacovacci*** [2], ***Dr. Aize Pellon Rodriguez*** [3], ***Dr. Radhika Kataria*** [3], ***Dr. Anita Grigoriadis*** [3], ***Dr. Ester Orlandi*** [2], ***Dr. Nicola Alessandro Iacovelli*** [2], ***Dr. Loris De Cecco*** [2], ***Dr. Mara Serena Serafini*** [2], ***Dr. Teresa Guerrero Urbano*** [4], ***Dr. Anthony Kong*** [1], ***Dr. Mary Lei*** [4], ***Dr. Imran Petkar*** [4], ***Dr. Tony Ng*** [3], ***Dr. Gilad Bachrach*** [5], ***Prof. Cynthia Sears*** [6], ***Dr. David Moyes*** [3], ***Dr. Tiziana Rancati*** [2], ***Dr. Miguel Reis Ferreira*** [1]

1. *1. Guy's & St Thomas' NHS Foundation Trust, 2. King's College University, London,* ***2.*** *Fondazione IRCCS Istituto Nazionale dei Tumori,* ***3.*** *King's College London,* ***4.*** *Guy's & St Thomas' NHS Foundation Trust,* ***5.*** *Hebrew University – Hadassah,* ***6.*** *Johns Hopkins University*

Aim

The microbiota consist of a dynamic community of inter-connected micro-organisms inhabiting a specified environment within/on multicellular organisms. Previous research suggests that the microbiota affects cancer therapy outcomes. In colorectal cancer (CRC) studies, *Fusobacterium nucleatum,* an oral commensal gram-negative anaerobe, has been observed to be associated with CRC progression via mechanisms including immune evasion. Head and neck squamous cell carcinoma (HN-SCC) is often diagnosed at advanced stages, with curative treatments yielding poor survival outcomes. The role of oral bacteria in HN-SCC treatment outcomes remains underexplored.

Our previous analysis of microbiome data from two independent cohorts showed that patients with a higher relative abundance (RA) of tumoural *Fusobacterium nucleatum* and salivary *Fusobacterium*, had improved survival outcomes. These findings were supported by in vitro 2D co-culture data within which *Fusobacterium nucleatum* actively reduced oral cavity squamous cell carcinoma (OSCC) cell viability. Our current 2D co-culture experiments are exploring the underlying mechanisms.

Method

An in vitro 2D co-culture model consisting of OSCC (TR146 cell line) +/- *Fusobacterium nucleatum* (ATCC 23726) was developed and optimised. Multiplicity of infection (MOI) ratios ranging up to 1000 were utilised. To assess whether the OSCC killing mechanism of *Fusobacterium nucleatum* is contact-independent, transwell experiments were undertaken in addition to separate experiments where OSCC cells were exposed to filtered bacterial supernatant. OSCC cell viability was assessed at day 5 post-infection. To further explore potential non-contact mechanisms and likely molecules implicated, filtered bacterial supernatant was treated with proteinase K (to cause protein degradation) prior to being added to OSCC cell cultures.

Significance was assessed with Student's t-test.

Results

In vitro experiments demonstrated a significant reduction in OSCC viability with the addition of *Fusobacterium nucleatum* ($p<0.001$). OSCC killing rose with MOI. Co-cultures with OSCC and *Prevotella oralis,* a comparator gram-negative commensal anaerobe, showed no significant reduction in OSCC viability. *Fusobacterium nucleatum*-mediated cell kill was observed across multiple OSCC (TR146, HN5 and HSC3) and dysplastic (DOK) cell lines as well as with several wild-type *Fusobacterium nucleatum* strains (ATCC 23726 & 28856).

Transwell experiments at MOI 100 revealed equivalent OSCC cell killing in both transwell and non-transwell co-cultures, indicating a contact-independent mechanism of *Fusobacterium nucleatum* on OSCC. Exposure of OSCC cells to filtered bacterial supernatant led to a significant reduction of OSCC cell viability compared to controls.

Treatment of the bacterial supernatant with proteinase K did not increase OSCC cell viability compared with OSCC cells exposed to un-treated supernatant, suggesting that non-proteinaceous molecules/compounds are likely to be responsible for this effect.

Conclusion

Our in vitro data indicates that contrary to the findings of colorectal cancer studies, *Fusobacterium nucleatum* has an active role in OSCC cell killing. This correlates to our previous findings following analysis of microbiome data from two independent patient cohorts that that *Fusobacterium nucleatum* detectability and increased RA in tumour tissue, in addition to increased *Fusobacterium* RA in salivary samples associates with improved survival outcomes.

Mechanistic experiments suggest a contact-independent mechanism of action, likely to be attributed to by non-proteinaceous compounds. Metabolomics analysis is currently being undertaken to help to further elucidate mechanisms.

Global Assessment of Swallow Function (GASF) following Volumetric Modulated Arc Therapy (VMAT) Radiotherapy for Head and Neck Squamous Cell Carcinoma.

Poster

Mrs. Kirsty McLachlan [1], Dr. Kate Toft [1], Dr. David Noble [1], Dr. Mark Winton [1], Dr. Karen Mactier [1]

1. *NHS Lothian*

Aim

Swallowing dysfunction with associated negative impact on function and quality of life are highly prevalent following radical treatment for head and neck cancer (HNC). This has lead to many clinical trials focussed on investigating potential de-escalation of oncological treatment for HNC to reduce functional side-effects and preserve survival outcomes, and swallow preservation/rehabilitation. However, published data mostly pertain to heterogeneous patient cohorts, treatment protocols and dated radiotherapy techniques with little consensus on the optimum combination of tools and datapoints to report dysphagia.

The aim of this study was to conduct a global assessment of pre and post-treatment swallow function, using a range of commonly used swallow outcome tools, in a heterogeneous cohort of patients all treated with modern image-guided VMAT radiotherapy.

Method

All patients receiving radical radiation/chemoradiation for SCC of the larynx, oro-, hypo- or nasopharynx between October 2016 – 2021 were eligible for inclusion.

Treatment of the oropharynx, hypopharynx and larynx was 65Gy in 30 fractions, whilst nasopharynx was 70Gy in 33 fractions. Contouring and RT planning was conducted according to local guidelines and recent clinical trial protocols. Concomitant chemotherapy was given in 2 cycles of Cisplatin 100mg/m2, or 2 cycles of Carboplatin AUC5 in weeks 1 and 5 of radiotherapy treatment.

Patients underwent GASF with Speech and Language Therapists pre- and 6 months post-treatment. Data from five tools were collated: the MD Anderson Dysphagia Inventory, Global and Composite scoring (MDADI-G, MDADI-C), the Functional Oral Intake Scale (FOIS), the Performance Status Scale-Head and Neck: Normalcy of Diet scale (PSS-HN NoD), the 100ml water swallow test (WST) for capacity/volume/speed and maximal interincisal opening (MIO).

Results

Paired data from 176 patients were included across both time points.

MDADI-C mean score was 87.24 pre-treatment and 73.17 at 6 months post-treatment, which is a decrease of 14.57. This change reduction is greater than the published meaningful clinical important difference (10 points). The waterfall plot (Fig.2) illustrates the overall trend for decrease in scores.

Baseline mean FOIS score was 6.69 and at 6 months it was 6.1. A trend for a decrease in score reflects a decrease in range of diet textures and increase in reliance on enteral feeding at 6 months post-treatment.
Mean PSS-NoD score at baseline was 88.06 with a decrease to 74.88 reflecting increased restriction in diet textures.

Statistically significant change was observed in the WST. With a deterioration of the mean across all 3 parameters.

Mean MIO decreased (from 46.62mm to 41.71mm) and 17 patients developed trismus within the 6 month follow up period.

Conclusion
This paper adds new detail to the current understanding of the impact of VMAT radiotherapy on swallow function outcomes for people with HNC.
Patient numbers presented in this study are larger and include a wider range of swallow outcomes than previously published work. The trend for poorer function at 6 months post-treatment, and the large variation in scores is in keeping with other studies (Khan et al., 2015, Nutting et al., 2023) and reflects the heterogeneity of the head and neck population.
This paper highlights gaps in the evidence base in terms of a lack of a standardised 'core outcome set', consensus on ideal post-treatment outcomes datapoints and interpreting scores of swallow outcome tools.

Further data analysis is required to map scores to the functional impact on patients, and correlate outcomes with radiotherapy dose to identify predictors of severe toxicity.

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Figure 2: MDADI-C score change

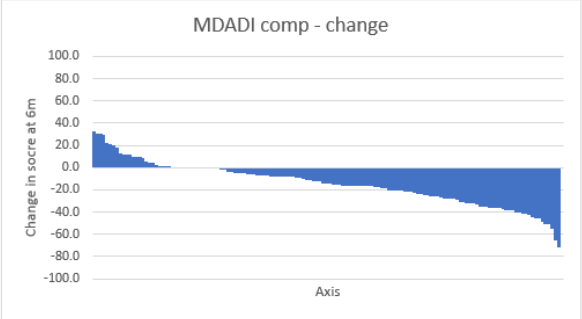

Figure 2 waterfall plot of mdadi-c changes.png

Head and Neck Lymphoedema Service Provision in the UK: A Survey of Practice

Poster

Ms. Alison Smith [1], ***Prof. Jo Patterson*** [2], ***Dr. Gemma Cherry*** [3]

1. *University Hospitals Coventry & Warwickshire,* ***2.*** *Liverpool University,* ***3.*** *University of Liverpool*

Aim

This questionnaire survey is designed to help get a better understanding of what services are available within the UK for patients with head and neck lymphoedema following surgery, chemotherapy and/or radiotherapy treatment for head and neck cancer. We know from the research published so far that head and neck lymphoedema treatment varies across the country and there is no consistent standard of care; meaning that patients may receive different types of treatment at different centres, or may not receive treatment at all in some areas.

We are seeking responses from a variety of professionals who work with head and neck cancer patients within the U.K to find out what services, if any, are available to refer patients with head and neck lymphoedema to, and what treatments may be available at these services.

Method

The survey has been designed to capture

1) Details on the professional completing the survey - their clinical experience and training
2) Resources available within their geographical service location
3) Assessment and treatment types available, if any, in their geographical service location
4) The decision making process that is used when deciding which assessment and treatment types are used

Survey link has been sent to SLT Clinical Excellence Networks and via social media to relevant organisations, including Macmillan Cancer Support, Myton Hospice, SWALLOWS support group, British Lymphology Society, Liverpool Head and Neck Cancer Centre and the RCSLT.

The link will be distributed three times in total, across three weeks, at different times in the week, to act as a prompt to complete and to achieve maximal response rate.

Responses will be coded - with no identifying information, onto SPSS. Descriptive statistics will be used to summarise the data.

Results

Survey is now live. Deadline for responses is 31st March 2024. Results will be analysed and ready for dissemination by end of April 2024.

Conclusion

It is expected that the UK survey of practice will demonstrate that access to treatment for head and neck lymphoedema is disparate across the country. Also that there is heterogeneity of treatment methods available.

Health-Related Quality of Life in Head and Neck Cancer Patients Presenting with Radiotherapy Late Effects

Poster

Ms. Sabina Khan [1], ***Mrs. Danielle Fairweather-Chan*** [2]

1. *University College London Hospital,* ***2.*** *UCLH*

Aim

Patients undergoing Radiotherapy to the head and neck region can experience acute and chronic side effects. The severity is dependent on factors such as dose, age and region treated (1). Management of these side effects can be complex and significantly impact patients' quality of life (2). In 2023, a Head and Neck Cancer (HNC) late effects clinic was opened at our single-centre, which utilised a health-related quality of life (HRQoL) measure as part of the referral process. HRQoL is a crucial outcome measurement for patients who have received radiotherapy for HNC. Being able to assess the burden of radiotherapy late-effects is essential to improving outcomes in HNC patients, as the physical and psychosocial impact of treatment can be distressing and profound (3). In this study, we explore trends in HRQoL and symptom burden in patients who are experiencing HNC late-effects with the aim to identify the needs of the service.

Method

Upon referral to the H&N late-effects clinic, patients are asked to complete the MDASI-HN questionnaire. The items in the MDASI-HN questionnaire includes questions regarding site specific radiotherapy side-effects, perception of health and general functioning. The item response option is a numerical scale from 0 to 10, with 10 being as bad as you can imagine. Data from the completed questionnaires were extracted and analysed within Microsoft Excel. An item that scored 5 and above was deemed significant. The referrals made and interventions administered for patients within the clinic were also recorded and categorised. Descriptive statistics were used to describe the results.

Results

So far, 20 patients have been referred into the H&N late effects clinic. The most common symptoms reported by patients were dry mouth (n=16), excessive mucous (n=14) disturbed sleep (n=13), feelings of distress (n=13), and fatigue (n=12), with dry mouth scoring the highest average response value (6.75). Patients reported that these symptoms impacted upon their mood and enjoyment of life the most.

A total of 43 subsequent referrals were made to help reduce the burden of late effects. Of those 43, 21% (n=9) of referrals were for occupational therapy and physiotherapy support, 14% (n=6) required psychological intervention and 14% (n=6) required referral to speech and language services. A further 2 patients were referred to the Oncologists, where one case of recurrence was diagnosed.

Conclusion

Although this is preliminary data, there is a clear trend in symptom severity affecting mood and enjoyment of life. There are already interventions that have been implemented within the late effects clinic to reduce symptom severity such as speech and language therapy, occupational therapy, and physiotherapy, which should lead to improvements in HRQoL. But from these results it is clear that patients also require adequate psychological

support, and at earlier stages such as prehabilitation to prepare patients for the burden of treatment and disease. The service will therefore further explore and develop the psychological support and interventions available for these patients.

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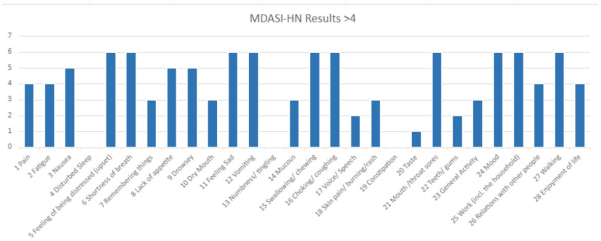

Mdasi hn graph.jpg

How we improved our FDS targets by requesting the right test at the right time for our dysphagia patients: 18 months of continuous improvement.

Poster

Ms. Nilima Ghadge [1], Dr. Aashlesha Sardesai [1], Dr. Cassandra Dede [1], Dr. Annu George [1], Dr. Afsal Latheef Tayyil Purayil [1], Dr. Jeffrey Otote [1], Dr. Osama Al-Bairouty [1], Ms. Jabin Thaj [1], Mr. Gaurav Kumar [1]

1. *Barking, Havering and Redbridge NHS Trust*

Aim

Dysphagia rings warning bells for upper oesophageal cancers or hypopharyngeal cancers in a head and neck clinic. However, the clinical picture is often murky and requesting inappropriate investigations can delay the pathway and consequently the treatment. The Edinburgh dysphagia score is a validated questionnaire that can be used to streamline the management of patients presenting with dysphagia or globus in two-week wait Ear Nose and Throat clinics This audit aims to start the use of EDS (Edinburgh Dysphagia Score) for triaging patients of dysphagia on 2WW (two week wait) and risk stratification based on it to reduce overall turnaround time over 18 months.

Method

This retrospective and prospective study studied a total of 154 patients seen in 9 months which were spread over a total period of 18 months presenting with dysphagia / globus on the cancer pathway and scored them based on EDS.

A total of 1990 patients were seen in head and neck cancer clinics at Barking, Havering and Redbridge NHS Trust from July 2022 to November 2023.

The low EDS scores were taken off the cancer pathway and referred for a barium swallow to look for non-malignant causes of dysphagia.

The high EDS scores were referred for OGD.

Results

A total 7% of patients were seen in the head and neck cancer clinic at our trust who were referred for dysphagia and globus sensation.

Out of this, 34% had true dysphagia as the main symptom and 65% presented with globus sensation.

Only 1.2% of patients were diagnosed with mid/ lower oesophageal cancer, who had a high Edinburgh dysphagia score.

None of the patients presented with these symptoms were diagnosed with hypopharyngeal or upper oesophageal malignancy.

Conclusion

Our data shows that a thorough history and EDS scoring are the key to diagnosing upper oesophageal cancers which is a watershed area between ENT and Upper GI, rapid communication is imperative to avoid delays.

EDS scores help streamline the pathway for upper gastrointestinal malignancies.

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Hypercalcaemia and multifocal craniofacial osteolytic lesions in Adult T cell leukaemia / lymphoma (ATLL) - a challenging diagnosis: Case report

Poster

Dr. Wei Ning Saik [1], ***Dr. Sabine Pomplun*** [1], ***Dr. Amrita Jay*** [1]

1. *UCLH*

Aim

A case of adult T-cell leukaemia/lymphoma (ATLL) presenting with hypercalcaemia and multifocal osteolytic lesions in the craniofacial region is presented. Challenges in diagnosis and management are discussed. ATLL is a mature neoplastic T lymphocyte proliferation which is endemic in certain parts of the world and is associated with human T-cell leukaemia virus type 1 (HTLV-1). The routes of HTLV-1 infection transmission are breast milk, sexual intercourse and blood transfusion. Not all HTLV-1 infected individuals develop ATLL, as this depends on a range of risk factors. They often have a long latency period, with lymphadenopathy and multiorgan involvement the common clinical presentation. Prognosis varies in the four different clinical subtypes.

Method

A 68-year-old woman with a history of hypercalcaemia and suppressed parathyroid hormone levels had experienced a right forearm fracture. Fluorodeoxyglucose-positron emission tomography (FDG-PET) was unremarkable. Magnetic resonance imaging (MRI) showed thickening of walls of right maxillary antrum and diffuse lytic bone lesions throughout the skull and maxillofacial bones. The differential diagnosis included a fibro-osseous process, plasma cell neoplasm and metastatic disease. A biopsy of the maxillofacial lesion was performed to investigate the underlying pathology and she was also referred to the haematology-oncology team to exclude a lymphoproliferative disease.

Results

The bone marrow trephine was inconclusive and did not exclude a plasma cell neoplasm. Flow cytometry showed mild kappa light chain restriction and detected a very small T-cell clone (<1%).

Histology of the nasal and maxillary biopsies featured an unusual fibro-osseous process with osteoblastic and osteolytic activity. Present in the intertrabecular spaces were multinucleated osteoclast-like giant cells, and a subtle population of mildly pleomorphic, medium to large-sized cells, some with prominent nucleoli. The features were not diagnostic of a specific entity and raised a range of differential diagnoses requiring additional diagnostic techniques and correlation with clinical and imaging findings.

Conclusion

The final diagnosis of ATLL was achieved through correlation of the histology and immunohistochemistry with serological findings of positive HTLV-1 status. Management included chemotherapy for ATLL, as well as therapy for HTLV-1 and hypercalcemia. However, the patient succumbed to the disease within a year of diagnosis. This case highlights the need for clinicopathological correlation early in the investigative process.

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IgG4 related thyroid disease presented as rapidly growing mass with skin changes

Poster

Mr. Soltan Islam [1], ***Dr. Adam Hatoum*** [1], ***Mr. Jagdeep Virk*** [1]

1. *Barts Health NHS Trust*

Aim

We aim to present a case report of a 63-year-old male presenting with a multi-nodular goiter and progressive symptoms over a number of years. He was eventually diagnosed with IgG4 related thyroid disease. This is a rare condition which is not often encountered, and thus diagnosis is frequently delayed.

Method

He initially presented in 2019 and following ultrasound scanning was found to have a BTA U2 multinodular goitre, with no compressive symptoms and normal TFTs. He continued to have routine follow up thereafter.

He represented 4 years later with a sudden increase in the thyroid lump with tracheal deviation, retrosternal extension , left vocal cord paresis and fungation through the skin.
Initial fine needle aspiration findings raised suspicion for anaplastic thyroid cancer and thus urgent transcervical retrosternal left hemi-thyroidectomy with skin excision was performed, with a view to adjuvant treatment/completion surgery thereafter depending on the final histopathology.
Histopathology demonstrated abscess formation which involved the reticular dermis and subcutaneous tissue with extension into skeletal muscle, but no carcinoma was identified.

Results

Immunohistochemistry for IgG4 was difficult to interpret in the context of non-specific staining for IgG. There was an increase in IgG4(+) cells (up to 70 cells per high power field), but the number of IgG4(+) cells did not appear to exceed 40% of all IgG(+) cells. Plasma cell infiltration was noted in a resected reactive lymph node capsule. Serum IgG was 21.0 g/L (5.5-16.5g/L), IgG4 was 1.12 g/L (0-0.86g/L).
FGD PET was performed to rule out other concerning features.
He was eventually referred to the Endocrinology team for management of his IgG4 disease.

Conclusion

The combination of clinical, serological, and histological findings, with histology as the gold standard, facilitates the diagnosis of IgG4-related diseases. Timely identification enables appropriate treatment, emphasizing the significance of comprehensive diagnostic criteria for accurate classification and management.

Impact of an Early Valve Failure Pathway on Laryngectomy Voice Prosthesis Lifespan: Preliminary results from a single centre

Poster

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Aim

Following total laryngectomy, the gold standard is for a voice prosthesis (VP) to be placed to re-establish spoken communication. VP lifespan varies greatly. When a VP fails patients experience loss of voice and risk of aspiration-related chest infection. Frequency of VP changes is known to be associated with a variety of factors including the presence of candida[1].

These changes cost the NHS in valve expense, clinician time and clinic space. Additionally, frequent changes impact patients' quality of life, with many patients traveling long distances to access clinics[2]. As one of the largest head and neck centres in the UK, optimising VP lifespan is critical.

The aim of the following service evaluation study was to look at voice prosthesis duration before and after implementation of an Early Valve Failure (EVF) pathway at our local trust.

Method

We formed a multidisciplinary team (MDT) comprising Speech and Language Therapy, Ear, Nose, and Throat, and Microbiology. The team reviewed existing guidelines including the East Kent anti-candida pathway[3] with a view to implementing a local pathway. Complex cases are discussed at quarterly MDT meetings.

Laryngectomees with VP life of less than 84 days commence the EVF pathway. The VP and a tracheoesophageal puncture swab are sent to microbiology for candida culture and susceptibilities. Initially nystatin is prescribed orally and via brush four times daily. If VP lifespan remains insufficient, appropriate patients commence fluconazole with a prophylactic VP change on day 14. Once VP exceeds 84 days nystatin is reduced to once daily and is discontinued after two long-lasting VPs.

Data regarding VP type, lifespan, failure reason, candida type and sensitivity, granulation presence, nystatin and fluconazole use, and patient adherence to pathway was recorded using excel spreadsheet.

Results

Of the 25 patients currently on EVF pathway, accrued over 4 years from January 2020 to January 2024 to date, 24 could be analysed (1 excluded due to national data opt-out). Of the remaining patients, nine had sufficient data on VP changes prior to and post commencing EVF pathway for analysis (at least four VPs).

The average VP lifespan prior to commencing the EVF pathway was 66.39 days [range 35 – 102.8]. This increased to an average of 85.24 [range 47 – 196] days whilst on the EVF pathway. 11.11% (1/9) patients required fluconazole, with the remaining 88.89% being treated with nystatin alone.

77.78% (7/9) patients experienced an increase in VP lifespan once commencing the EVF pathway (Fig. 1). 22.22% (2/9) patients did not experience an increase in VP lifespan – one of whom had multiple changes due to significant tissue changes rather than early VP failure.

Conclusion

Initial analysis suggests a positive trend of improved VP lifespan since implementation of the EVF pathway. Nearly all patients experienced improved VP lifespan with use of nystatin alone. We plan to continue using our EVF pathway to allow further analysis of results with larger numbers, including whether increased VP lifespan

is maintained. Investigating the challenges of EVF pathway implementation and compliance for both patients and staff will allow us to streamline the pathway for optimal use.

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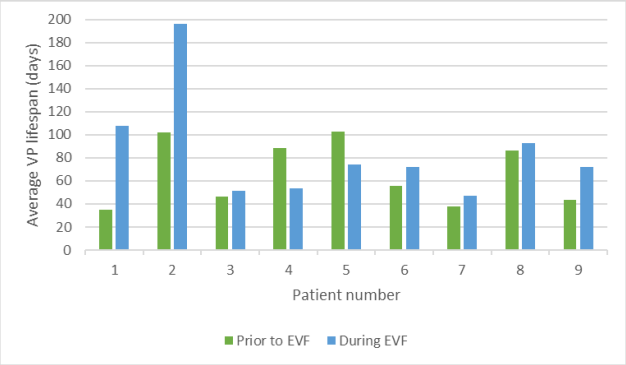

Figure 1. vp lifespan prior to and during evf pathway.png

Impact of Covid-19 pandemic on our parathyroid surgery service: a 6-year audit

Poster

Mr. Paul Liu [1], ***Mr. Faiz Tanweer*** [1], ***Mr. Mohammed Yousif*** [1], ***Mr. Peter Conboy*** [1]

1. *University Hospitals of Leicester NHS Trust*

Aim

Covid-19 pandemic has had significant impact on elective operations throughout the United Kingdom and the world. The challenge of managing the elective workload continues even after the pandemic due to a significant backlog of elective procedures. Primary hyperparathyroidism is a clinical disorder which presents with hypercalcaemia. Surgery is indicated for symptomatic disease including the presence of end organ damage such as renal stones or reduced bone mineral density. Few centres have reported on their success rate for parathyroidectomy. We conducted a 6-year retrospective review of success rate and complications at Leicester Royal Infirmary. We also looked at the impact of Covid-19 on our service.

Method

After approval from our ethical committee, we collected data from case files of all patients who had parathyroidectomy for primary hyperparathyroidism at our centre from January 2017 to December 2022. The data collected include demographics, pre- and post-operative calcium, imaging findings, histology results and complication rates. The procedure was defined as successful if the calcium levels returned to normal ranges (<2.6mmol/L) according to NICE guidelines.

Results

77 patients were included for analysis. Number of surgeries per annum dropped from 17-19 cases per year pre-pandemic to 3-4 cases per year between 2020 to 2021 before picking up again in 2022. Mean age is 64.9 years old with a female majority of 79.2%. 72 patients (93.5%) had their calcium level return to normal indicating a successful procedure. The rate of success is comparation pre-pandemic (94%) and during the pandemic (92.6%). Of the patients who had pre- and post-operative DEXA scans, 7 patients had improvement in their T score. 2 patients (2.6%) had unilateral vocal cord palsy. Overall, there is 83% concordance between imaging (ultrasound/SPECT-CT) and operative findings.

Conclusion

We found that Covid-19 pandemic has had a significant impact on our parathyroidectomy service with a significant reduction in number of operations per year. However, the success rate remains around 93% which is comparable with the literature. There is a high rate of concordance between imaging and operative findings. The rate of complications remains low for this operation.

Reference (if applicable)

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Impact of joint peer review with a specialist radiologist in head and neck cancer radiotherapy planning

Poster

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1. *Department of Imaging, The Clatterbridge Cancer Centre NHS Foundation Trust, Liverpool and Faculty of Health and Life Sciences, University of Liverpool, Liverpool,* ***2.*** *The Clatterbridge Cancer Centre NHS Foundation Trust*

Aim

Head and neck oncology is heavily dependent on interpretation of radiology. Given the complexities of head and neck anatomy and with the technological advances in imaging modalities, delineating target areas can be challenging and often requires consensus from oncologists and specialist radiologist to avoid geographical miss. This raises the question whether input from radiology should be formally scheduled as part of the radiotherapy contouring processes.

Peer review of head and neck cancer radiation therapy target volumes by a specialist radiologist was introduced in our centre to optimize the RT planning workflow in May 2022. Our aim was to assess the impact of this practice through qualitative and quantitative analysis.

Method

H & N patients treated with radiotherapy between May-2022 and August-2023 were reviewed by a specialist HN radiologist. Incidence of changes in T, N, M and TNM-stage was prospectively recorded. Incidence of 'major' (change in gross tumour volume and/or high-dose clinical target volume, dose/fractionation) or 'minor' (change in intermediate or elective dose clinical target volumes or organs at risk), as defined by The RCR guidance, was also recorded. We evaluated whether any of these changes were time dependent (Time interval between baseline Imaging/MDT to therapy planning Imaging/Peer Review). Other clinical variables recorded included: age, gender, primary diagnosis, tumour site, significant incidental findings, post-operative pTNM, post-operative disease status in adjuvant setting on planning imaging (NIRADS), need for additional imaging. We also recorded number of scans reviewed per patient, types of imaging studies reviewed, time taken for review and number of radiologist PA's required. Retrospective analysis of a prospective database was performed.

Results

410 patients (252-definitive, 137-adjuvant, 21-palliative) were reviewed of which 51.5%-oropharynx followed by 26.8%-Larynx & Hypopharynx. Mean age was 66.14 yrs(SD 11.46) and M:F was 4:1. Baseline and Therapy planning imaging was reviewed for 100% patients of which baseline included: MR(91.7%), CT(96.1%), US(34.1%), PETCT(31%) and therapy planning (62%-CECT, 19%-MR&CT, 15%-CT, 4%-PETCT). In all patients(n=410), T/N/M/TNM-stage percentage upstage was 27/36.8/8.3/42.2% and in definitive cohort(n=252), it was 41.7/56.7/7.1/59.5%. Reviewing RT-planning Imaging in adjuvant cohort(n=137), 76.6% were NIRADS-1, 11.7% NIRADS-3/4/loco-regional disease and 11.7% distant metastasis. T/N/M/TNM-stage upstage was time dependent and the mean time interval between MDT to RT was higher in upstaged patients ($p < 0.001$). Overall percentage change in treatment plan: no/minor/major/palliative was 40.5/33.9/17.3/8.3% and in definitive cohort 30.2/42.1/20.6/7.1%. Change in plan was not dependent on mean time interval between MDT to RT. Average 10 patients (4 imaging studies/patient) were reviewed by radiologist in 1PA (time to review and peer review meeting time).

Conclusion

Routine head and neck radiologist input in radiotherapy peer review is feasible and resulted in a number of major and minor changes to treatment. Inputs not only eased the contouring for oncologists but also lead to updation of current disease stage just prior to treatment which has a direct impact on measuring clinical outcomes. Since the change in treatment was not time dependent; radiologist inputs should be offered to all patients irrespective of the time interval between MDT to radiotherapy.

Overall, our results suggest that this is a practice changing step in the radiotherapy workflow which has a direct impact on patient management. *Working together will provide mutual teaching/learning opportunity for radiologists, oncologists, medical physics, trainees and others involved in the pathway.*

Reference (if applicable)

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Implications of anatomical variants of lower limb vasculature for fibular free flap harvest: a case report and systematic review

Poster

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Aim

The fibular free flap (FFF) has been a workhorse in maxillofacial reconstruction. It relies on the peroneal artery (PA), which is known for its consistent anatomy and limited contribution to pedal circulation. In certain anatomical variants, the PA is the dominant blood supply to the foot. Awareness of these anatomical variants is extremely crucial, as it would prevent the harvesting of a FFF due to the potential for foot ischemia and subsequent limb loss. Our aims are to present a case of anatomical variation within the leg of a patient planned for a FFF harvest; to highlight the importance of pre-operative imaging when planning of FFF harvest; and to finally summarise cases where anatomical variants were identified within the literature, and whether limb ischaemia ensued.

Method

We present a case of a 51-year-old male with T4N0M0 squamous cell carcinoma (SCC) of the right mandible planned for surgical excision, selective neck dissection and reconstruction with left osteocutaneous FFF. Pre-operative CT angiogram of the lower limbs identified an anatomical variation within the left leg. Furthermore, a Protocol registered with PROSPERO and reported in accordance with the Preferred Reporting for Items for Systematic Reviews and Meta-Analyses (PRISMA). Comprehensive electronic search strategies between January 2000 to January 2023 were developed by a librarian. Studies were screened by two independent reviewers.

Results

CT angiogram identified the left posterior tibial artery to taper off in the distal leg, with the dominant PA taking an aberrant course medially to continue along the expected path of the PTA at the medial malleolus. According to Kim-Lippert's classification, his variation was described as type IIIA. Consequently, the contralateral fibula to the pathology could not be harvested, and therefore the ipsilateral fibula was used. In our systematic review, eighteen articles met the eligibility criteria, identifying 94 cases with dominant PA. The most common variation was IIIA (n=34), followed by IIIB (n=33), IIIC (n=21), and IIID (n=5). One case did not fall within the Kim-Lippert's classification system. Pre-operative imaging was not performed in 12 cases, resulting in abandoning FFF harvest intra-operatively in three cases. In cases where FFF harvest was not abandoned, limb ischaemia occurred in two cases requiring vascular bypass, and localised ischemia occurred in one patient.

Conclusion

Pre-operative vascular imaging emerges as a vital component in surgical planning, offering precise insights into vascular anatomy, and the fibular blood supply. The ability to tailor the surgical approach based on the encountered anatomical variants enhances procedural safety, significantly mitigating the risk of a vascular catastrophe.

Improving communication between primary and secondary care when referring patients on the two week wait referral pathway using teledentistry – an iterative investigation.

Poster

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Aim

The benefit of the two-week wait (TWW) referral pathway is a guaranteed timely specialist assessment for a patient which a generalist suspects has an undiagnosed cancer. TWW referrals are not counted in the primary care referral numbers scrutinised by clinical commissioning groups nor subject to any form of referral management system. There are significant disadvantages for secondary care from TWW referrals including the management of the volume of patients and resources required to meet the 14-day target. Despite the increase in the numbers of patients referred with suspected head and neck cancer (HNC), the yield of diagnosed cancers has not increased, most patients referred via TWW are not diagnosed with HNC.

The purpose of this explorative work was to undertake qualitative research to inform the design of a communication intervention for suspected HNC.

Method

Two researchers conducted informal interviews and focus groups with clinicians from the Northern Cancer Alliance, secondary care (head and neck surgeons), primary care (General Practitioners (GPs) and General Dental Practitioners (GDPs)) and manager of dermatology services (Newcastle Upon Tyne Hospitals Trust) to explore opinions and ideas about the existing and potential changes or supplements to the two-week wait suspected HNC referral pathway.

The work proceeded in an iterative manner, hampered by delays in grant access and everchanging Covid-19 environment.

The two researchers attended a coproduction course, advertised for recruitment, contacted potential participants, conducted focus groups and informal discussions both face to face and via email. Focus group discussions were recorded, following focus group researchers; reviewed data, met to discuss and plan next steps and lines of enquiry.

Results

Focus groups in the North East of England with GPs, GDPs and Health Care Assistants showed that there was a general acceptance of the tele-dermatology service with some caveats in terms of managing risk in primary care. There was enthusiasm from head and neck surgeons; Ear Nose and Throat (ENT) and Oral Maxillofacial (OMFS) that tele-dentistry could be useful to triage oral lesions. There is international experience of utilising teledentistry and shared expertise with authors of published work provided information on the safety and sensitivity of tele-dentistry in the triaging, monitoring and diagnosis of oral lesions.

The authors wrote an opinion piece proposing the use of teledentistry for triage of suspicious oral lesions as part of the TWW referral pathway along with international OMFS proposing the increase in the use of teledentistry to improve the communication between primary and secondary care.

Conclusion

In the UK there is an opportunity to utilise technology which is already in existence and used on a daily basis in the NHS (established locally in the North East of England General Practices and proposed throughout the

NHS in England) because of the work done during Covid-19 in the development of tele-dermatology services for primary care referral and subsequent triage of suspected skin cancers by specialists.
Currently there are issues of inequality of services in terms of dental access around the country and there are opportunities to utilise well established technology to triage TWW referrals for suspicious oral pathology from GDPs and GPs. Guidance and experience from international experts in the use of tele-dentistry exist and this should be the basis for mobilising teledentistry in NHS suspected cancer pathways to address this current crisis in provision of general dentistry for both patients and GPs.

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Improving patient outcomes : a new patient-centred initiative

Poster

Mrs. Yun Li [1]

1. *Oxford University Hospitals NHS Foundation Trust*

Aim

Background:

Thames Valley Cancer Alliance treats around 350 new head and neck cancer patients in Oxford University Hospitals each year, with population coverage from Oxfordshire, Buckinghamshire, Berkshire, and Wilshire. Around half of the patients will be diagnosed at the local hospitals (spoke) then have treatment in Oxford (hub). Those patients often go back to their local hospitals for follow up.

Head and neck cancers are known to require several disciplines for their pre-treatment, on treatment, rehabilitation, surveillance, and palliation support. This includes medical team along with the CNS, dietician, SALT, physiotherapist, psychologist, lymphoedema, dental therapist, restorative dentist, and community palliative care services. However, the local teams are both relatively lack of experience in supporting head and neck cancer patient, and patient information due to the hub-spoke setting.

The above post the risks of compromising patient care.

Therefore, networking and specialty training are paramount to improve outcomes for our patients.

Method

I took up the TVCA CNS and AHP lead role at the end of 2022 and decided upon an initiative to link up all head and neck professionals, CNSs and AHPs cross the network to improve the patient pathway through focused group discussion and education sessions. A full MDT member education day and a CNS and AHP networking day were organised in Jan 2023 and Jan 2024. The events involved collecting contacts for all the relevant head and neck health care professionals cross the network, collecting joint interests and arranging the agenda. Importantly we included patient representatives to all the sessions and discussions. The educational sessions and CNS and AHP pathway discussions are the main focuses on the two events, with networking on top of these focuses.

Results

The full MDT education day had over 90 attendees, the sessions ranged from surgery, oncological developments, communication skills, and palliative topic.

The CNS and AHP networking day had 90% of all the network CNS and AHPs attended. The meeting identified service gaps, education needs, changes can be implemented straight away, improved understanding of our patients' care pathways, and networking plans for the future. Most importantly, we had valuable suggestions/ideas from the patient representative which will be central to ongoing work planning.

The education presentations are well received in both events, I have seen some benefits from these sessions in our patients' care cross the network. These sessions were particularly valuable for junior members of the team. The pathway discussion session was extremely beneficial for a such complex cancer pathway.

Conclusion

Networking and specialty education are paramount to improve the head and neck cancer patients' care, particularly in areas with hub-spoke model, such as the TVCA.

I will set up an online group forum via Teams for TVCA CNS and AHP, as well as further face to face and online education sessions. These will be helpful for us to continue building a robust network, for information/resource sharing, education, service improvement, and research opportunities.

Informally there have been many instances of improved patients' support and improved communication since the networking day. Further evaluation is ongoing.

Incidence and impact of acute kidney injury in patients with locally advanced head and neck cancer treated radically with concurrent platinum chemotherapy and radiotherapy

Poster

Dr. Jenny McKeon [1], ***Dr. Cat McDonald*** [2], ***Dr. Charlie Liu*** [3], ***Dr. Sarah Hargreaves*** [1]

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Aim

The incidence of locally advanced head and neck cancer (LAHNC) has risen by over 37% since the early 90s, representing 3% of all cancer cases[1]. The current standard of care recommends concurrent platinum chemoradiotherapy (CRT) with a total cisplatin dose of at least 200mg/m2[2]. Platinum chemotherapy is associated with developing acute kidney injury (AKI), with an incidence as high as 69%[3], due to dose dependent, or cumulative nephrotoxicity [4]. 3 weekly (3W) regimes demonstrate over 10% higher incidence rate than weekly (1W) regimes [5].

LAHNC patients often represent a comorbid population, with higher incidence rates of alcohol consumption and smoking[6], increasing their risk of developing AKI.

We conducted a real-world analysis of the incidence of AKI in LAHNC patients receiving definitive and adjuvant concurrent platinum CRT over a 2-year period in our cancer centre.

Method

We conducted a retrospective review of all patients treated radically with concurrent platinum CRT for LAHNC between July 2021 and July 2023. Patients who completed definitive or adjuvant radiotherapy were identified from our radiotherapy administrative software Mosaiq. Data extracted from the chemotherapy prescribing platform identified the patients who received at least one dose of either 3W or 1W cisplatin or carboplatin. For those receiving definitive CRT, complete metabolic response (CMR) rates were recorded from PET-CT reports. Demographic data was collected, along with Same Day Emergency Care (SDEC) reviews for AKI and inpatient admissions. Measured data included serum renal function at baseline, weekly during treatment and post-treatment.

Results

107 patients were included. 91 (85%) received definitive CRT, 16 (15%) received adjuvant CRT. 76% were male. Median age range was 61 years.

72 (67%) were intended for 3W Cisplatin, 29 (27%) 1W Cisplatin, 5 (5%) 3W Carboplatin and 1 (0.9%) 1W Carboplatin. Of 72 intended for 3W Cisplatin, 8 patients changed regimen. 6 patients required a dose reduction.

2/30 patients intended for 1W Cisplatin required a change in regimen.

35% (25/72) vs 3% (1/30) of patients required treatment for AKI in the 3W Cisplatin and 1W Cisplatin groups, respectively. 21/25 were reviewed in SDEC. 19/25 required admission. No Carboplatin patients required treatment for AKI.

23% (6/26) of patients diagnosed with AKI didn't return to baseline creatinine.

There was no correlation between pre-existing comorbidity and developing an AKI.

85% of patients intended for definitive 3W CRT had a CMR versus a CMR rate of 88% in the 1W cisplatin group.

Conclusion

AKI occurred in 35% (25/72) of patients who received 3W CRT, compared with only 3.3% (1/30) of patients who received 1W Cisplatin. This indicates that high dose platinum therapy can have significant consequences for our

patients, as AKI development has been associated with a reduced long- term survival[7]. 3W Cisplatin regimes also implicate real world costs on our SDEC services and result it increased admission rates. Of those that received definitive CRT, there were similar CMR rates.
This study is a single centre study, however these findings reflect the real world experience of over 100 patients and support the careful consideration of whether theoretical benefits of 3W cisplatin outweigh the increased risk of AKI.

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Incidental dose to the oropharynx with involved neck only radiotherapy in squamous cell cancer of unknown primary of the head and neck

Poster

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Aim

Squamous cell carcinoma of unknown primary (SCCUP) in the head and neck is rare.[1] Optimal management remains poorly defined. Target volumes for radiotherapy are inconsistent. There remains much controversy regarding involved neck only (INO) versus bilateral neck and mucosal (MUC) radiotherapy.[2]

There has been increasing traction for INO radiotherapy with evidence suggesting this may be a safe approach.[3] A recent, national multicentre series demonstrated poorer outcomes with surgery (neck dissection) alone compared to treatment that included radiotherapy.[4] The disparity in outcomes between surgery to neck alone Vs radiotherapy to neck alone (INO) has not been previously investigated. Our hypothesis is that that the oropharynx receives a therapeutic incidental dose of radiation, even with INO radiotherapy.

The aim of this work is to evaluate the incidental dose to potential primary sites with INO radiotherapy and to review long term clinical outcomes in patients with SCCUP treated in this way.

Method

This is a retrospective cohort study. Eligible patients had a diagnosis of SCCUP and unilateral neck disease, and were treated with radiotherapy to the INO. Patient demographics, treatment details, length of follow up and survival outcomes were collected.

Potential primary sites (tonsil, base of tongue and entire oropharynx to include both these structures plus soft palate and posterior pharyngeal wall (split into ipsilateral only and bilateral oropharynx)) for each patient were retrospectively contoured and the patients' original INO treatment plan was re-run to allow for evaluation of the incidental dose to these volumes.

Survival probability was evaluated from date of diagnosis to date of death from any cause (Overall Survival/OS), death from cancer (Cancer Specific Survival/CSS) and recurrence of disease (Recurrence Free Survival/RFS), and calculated via Kaplan-Meier method. Details regarding recurrence (local; primary site emergence, regional: cervical lymph nodes or metastatic) were recorded.

Results

Twenty patients treated with volumetric modulated arc therapy August 2012 - April 2016 were evaluated. Median duration of follow up was 86 months (IQR 30 - 101 months). Median age was 61 years. 65% of patients had N2b (AJCC 7th edition) disease. Tumour p16 status was not assessed in 70% of patients (pre-dates routine testing), in those tested 50% had p16 positive disease

Incidental dose to oropharynx structures are as shown in table 1. Figure 1 depicts the areas receiving 40-50Gy BED.

5 year OS was 60% (CI: 42% to 86%), with 5 year CSS of 94% (CI: 84% to 100%). 5 year RFS was 78% (CI: 62% to 100%), with recurrences universally driven by distal metastases. There was no primary site emergence in any patient.

Conclusion

We have shown in our previously published work that patients with a diagnosis of SCCUP head and neck may be safely treated with INO RT.[3] We now have extended follow-up for this cohort. No contralateral neck relapses or primaries emerged in patients treated with INO radiotherapy after prolonged follow-up. This may be partly due to the potential primary sites receiving an incidental mean dose of RT between 40-55Gy.

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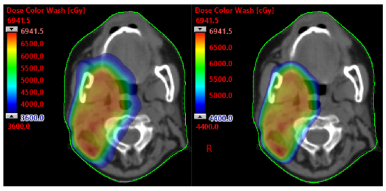

Figure 1: A representative case illustrating 40BED and 50BED isodose colour wash. BED = Biologically equivalent dose

Figure 1 bahno 2024.png

Parameters	Oropharynx (Bilateral)	Oropharynx (Ipsilateral)	Base of Tongue (BOT)	Ipsilateral Tonsil
Mean Dose (Gy)	40.4 ± 5.6	48.7 ± 9.0	46.4 ± 10.4	55.4 ± 12.2
D95% (Gy)	20.0 ± 6.2	42.7 ± 10.6	32.3 ± 9.1	42.1 ± 17.2

Table 1: Dosimetry data for oropharynx structures

Table 1 bahno 2024.png

Intraosseous Rhabdomyosarcoma of the Head and Neck: A Case Report and Review of the Literature

Poster

Dr. Fatima Elmahgoub [1], ***Dr. Deepti Sinha*** [1], ***Dr. Nicholas Kalavrezos*** [1], ***Dr. Simon Morley*** [1], ***Dr. Amrita Jay*** [1]

1. *UCLH*

Aim

The aim of this report is to present the case of an adult patient presenting with maxillary intraosseous rhabdomyosarcoma and review the available literature on this tumour in the head and neck region. Additionally we aim to discuss challenges in radiological and histological diagnosis, and clinical management of patients presenting with this tumour.

Method

There is limited literature available on rhabdomyosarcomas of the head and neck in adult populations. Furthermore, primary intraosseous rhabdomyosarcoma is an extremely rare malignancy. There are many challenges surrounding diagnosis and management of patients presenting with such tumours. These tumours typically present as painless expansile masses, and may be clinically mistaken for odontogenic cysts or cystic neoplasms. Histologically, these tumours may have spindle or round cell morphology and express multiple immunohistochemical markers including cytokeratins and skeletal muscle markers. Therefore they may be misdiagnosed as bone sarcomas or sarcomas arising from odontogenic tumours. Awareness of this entity is important for appropriate management of patients. Management is multimodal and includes surgery and adjuvant chemotherapy.

Results

We present the case of a 48 year old male who was referred to the OMFS department regarding a mass in the right maxillary edentulous alveolar ridge/gingiva. CT and MRI demonstrated an intraosseous lesion with buccal bone erosion and extraossoues soft tissue extension. Incisional biopsy revealed a high grade spindle cell sarcoma with rhabdomyoblastic differentiation, favouring a primary rhabdomyosarcoma of bone. Immunohistochemistry showed diffuse expression of ALK, as well as expression of cytokeratins and skeletal muscle markers. Molecular genetics showed the presence of an EWSR1 gene rearrangement. The patient underwent a hemi-maxillectomy with clear margins and received 6 cycles of adjuvant chemotherapy with doxorubicin and ifosfamide. He developed neutropenic sepsis post cycle 3 and isofosfamide was omitted after cycle 4. Two years later, the patient developed a recurrence in the right buccal space and received palliative treatment. He subsequently died under a year later.

Conclusion

Primary intraosseous rhabdomyosarcoma is a recently described entity. It is an aggressive tumour with high recurrence rates and limited data available. Histologically, these tumours are associated with conflicting features, possessing round or spindled cell morphology and expressing a wide range of immunohistochemical makers, rendering diagnosis challenging. Clinical management includes surgery and adjuvant chemotherapy. The potential therapeutic benefit of their association with ALK overexpression has been highlighted in few studies. Increased awareness of this entity and the challenges surrounding diagnosis, management, and quality of life is important, in order to improve survival outcomes for patients presenting with this tumour.

Reference (if applicable)

Le Loarer F et al. A subset of epithelioid and spindle cell rhabdomyosarcomas is associated with TFCP2 fusions and common ALK upregulation. Mod Pathol. 2020 Mar;33(3):404-419. doi: 10.1038/s41379-019-0323-8. Epub 2019 Aug 5. PMID: 31383960.
Agaram NP et al. Expanding the Spectrum of Intraosseous Rhabdomyosarcoma: Correlation Between 2 Distinct Gene Fusions and Phenotype. Am J Surg Pathol. 2019 May;43(5):695-702. doi: 10.1097/PAS.0000000000001227. PMID: 30720533; PMCID: PMC6613942.
Xu B et al. CR. Head and neck rhabdomyosarcoma with TFCP2 fusions and ALK overexpression: a clinicopathological and molecular analysis of 11 cases. Histopathology. 2021 Sep;79(3):347-357. doi: 10.1111/his.14323. Epub 2021 May 19. PMID: 33382123; PMCID: PMC8243398.
Hahn E et al. Adult Head and Neck Rhabdomyosarcoma: Management, Outcomes, and the Effect of Intensity Modulated Radiation Therapy on Locoregional Control. Adv Radiat Oncol. 2022 Aug 27;7(6):101055. doi: 10.1016/j.adro.2022.101055. PMID: 36420200; PMCID: PMC9677199.

Is Extended Reality the Future of Surgical Education? A Randomised Controlled Trial in Head and Neck Surgery.

Poster

Mr. Mohamed Yousef [1], ***Mr. Jack Faulkner*** [2], ***Mr. Stephen Robertson*** [3], ***Mr. Asit Arora*** [2]

1. *Kings College London,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust,* ***3.*** *Guys and St Thomas NHS foundation trust*

Aim

Extended reality (XR) is the latest evolution in human-computer interaction, encapsulating virtual, augmented, and mixed reality. Surgical education is being revolutionised through three-dimensional anatomical modelling and remote operative demonstrations, aiding students and trainees in traversing complex head and neck anatomy.

Accelerated by the pandemic, online remote learning has become a core part of both medical school and postgraduate teaching, primarily using video-conferencing platforms such as Microsoft Teams. This study evaluates the use of an online XR platform for remote surgical head and neck education, looking at parapharyngeal anatomy and pathology, and highlights the immediate benefits of XR.

Method

A virtual environment tailored to the study was built within Gatherings (an online XR platform), including spaces for lecture presentation, anatomy demonstration, and case discussion. Three-dimensional anatomical modelling – derived from case specific imaging data was used to compliment the learning experience. 28 undergraduate medical students across 4 medical schools were randomly selected to partake in a case-based discussion (CBD), hosted on either the XR platform or Microsoft Teams. Participants completed pre- and post-multiple-choice question (MCQ) tests to evaluate educational value. They also provided feedback via a comprehensive survey concerning their experience in XR or Teams.

Results

MCQ performance improvement was significantly greater among students who took part in the XR group of the study (3.23 ± 2.03 vs 1.54 ± 1.42, $p = 0.013$). Participants found completing the CBD in XR to be a more engaging and enjoyable experience than in Microsoft Teams. 92% of XR participants agreed or strongly agreed that XR technology can improve surgical education.

Conclusion

XR has the potential to become an integral part of head and neck education. This study found that CBDs hosted in XR offered more engaging discussion, as well as enhanced knowledge acquisition when compared to platforms like Microsoft Teams. While challenges like VR sickness, physical discomfort, and issues with battery life have been identified, they are expected to be addressed by future technological advancements and careful session planning. Future longitudinal research is the next step needed to evaluate the long-term effectiveness of XR for head and neck surgical education.

Is having both MRI and PET-CT useful to assess post treatment response following (chemo)radiotherapy for head and neck SCC?

Poster

Mr. Mohamed Salem [1], ***Mr. Richard Gan*** [1], ***Mr. Muhammad Suleiman*** [1], ***Dr. Abdelrahman Elsebiey*** [1], ***Mr. Winson Wong*** [2]

1. *Ear Nose and Throat Department, Hull University Teaching Hospitals NHS Trust, Hull,* ***2.*** *Hull and East Yorkshire Hospitals NHS Trust*

Aim

PET–CT is recommended after non-surgical treatment of oropharyngeal squamous cell carcinoma (OPSCC) to detect residual disease. At our institution, our preference is to use dual imaging modality (PET-CT and MRI) for post treatment assessment. Whilst MRI provides better anatomical assessment, its value in addition to PET-CT has not yet been fully examined. This study compared the concordance between both imaging modalities and the outcome of subsequent interventions done (either radiological or pathological) and at 1 year follow up in patients treated with (chemo)radiotherapy [(C)RT)] for OPSCC. The purpose of this study was to determine the benefit of the addition of MRI to FDG PET-CT in assessing treatment response from [(C)RT] in OPSCC at our center.

Method

Patients treated at our center with primary CRT for OPSCC from January 2016 to December 2022 were enrolled in this retrospective study. Clinical information was collected.Post-treatment MRI and FDG-PETCT outcomes were categorised into “full response” (F), “post treatment changes” (PTC), “Equivocal” (E) and ”residual disease’ (R). These outcomes from MRI and FDG-PETCT were compared and assessed for concordance or discordance. If further investigation was required for example if a biopsy was performed, then the result of this was used to reflect the accuracy of the initial post treatment imaging. IBM SPSS v27.0, and R v4.3.2 were used for the data analysis.Diagnostic test parameters were calculated for both PET-CT and MRI at the primary neoplasm site and the neck area. Compbdt for R was used to compare between diagnostic accuracy (DTA) parameters. P value less than 0.05 was considered statistically significant.

Results

144 patients treated with curative CRT were identified. Demographic, clinical details summarised **(table1)**.98/144 patients had PET-CT and MRI to assess CRT response. The sensitivity and specificity of MRI and PET-CT at the primary site were 22.5%, and 89.29%, 55.56% and 90.11% respectively.The PPV and NPV of MRI and PET-CT were 18.18%, 91.46%, 35.71% and 95.35%,respectively.The overall test accuracy was 87% for PET-CT and 82.8% for MRI,with no significant differences between both imaging techniques. In the neck area,the sensitivities and specificities of MRI and PET-CT were 50%, 83.72%, 77.78%, and 93.88%, respectively.No significant differences were found for sensitivity ($p = 0.211$), however, the specificity of PET-CT was significantly higher in the neck area compared to MRI ($p < 0.001$). PET-CT showed better predictive values (PPV 53.85%, NPV 97.87%) compared to MRI (PPV 17.65%, NPV 96%). The overall accuracy of PET-CT in the neck was higher than MRI (92.52 vs 82.8).

Conclusion

Our study showed that MRI is complementary, especially in patients with equivocal or residual disease on post-treatment PET-CT scan in OPSCC based on the concordance between MRI and additional investigations or at 1 year clinical follow up with overall accuracy of 91% in the primary site and 89.5% in the neck area. However,

due to the low number of positive cases in our study , more research is needed to validate the benefits of MRI.

Reference (if applicable)

1.NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Head and Neck Cancers V.1.2020. © 2020 National Comprehensive Cancer Network, Inc.**2.**Wotman M,t al. Improving post-CRT neck assessment in patients with HPV-associated OPSCC (Review). *Mol Clin Oncol.* 2020;13(4):24.**3**.Mehanna H, et al. PET-CT Surveillance versus Neck Dissection in Advanced Head and Neck Cancer. N Engl J Med. 2016;374(15):1444-54.
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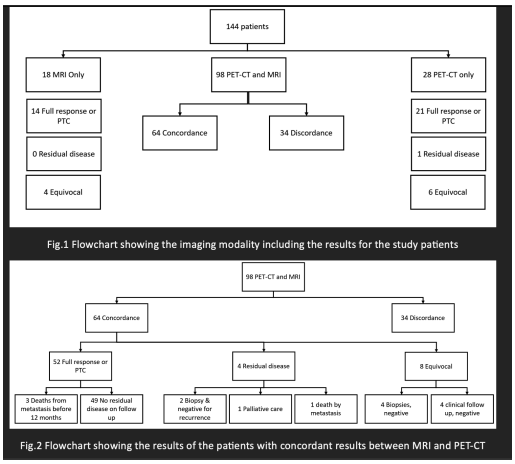
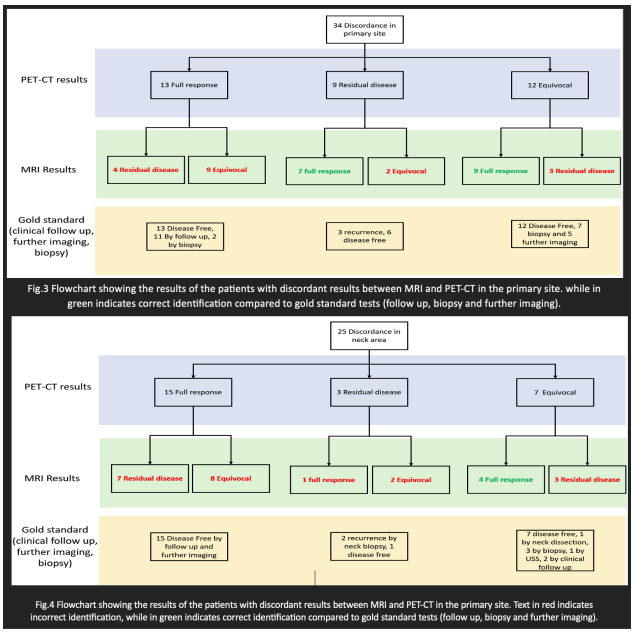
Table.1 Characteristics of the included patients

Characteristics	No.	%
Age (mean ± SD)	62.86 ± 8.97	
Age at diagnosis (mean ± SD)	60.54 ± 9.10	
Gender		
Male	114	79.2%
Female	30	20.8%
Cancer site		
Tonsil	77	53.8%
Base of tongue	53	37.1%
Lateral Pharyngeal wall	3	2.1%
Soft palate	4	2.8%
Base of tongue/ Tonsils	5	3.5%
Other sites	1	0.7%
Stage		
Stage I	1	0.7%
Stage II	3	2.1%
Stage III	26	18.1%
Stage Iva	102	70.8%
Stage Ivb	12	8.3%
HPV status		
p16-positive	109	75.7%
p16-negative	10	6.9%
Unknown	25	17.4%

1.png



2.png


34 Discordance in primary site
PET-CT results
13 Full response
9 Residual disease
12 Equivocal
MRI Results
4 Residual disease
9 Equivocal
7 full response
2 Equivocal
9 Full response
3 Residual disease
Gold standard (clinical follow up, further imaging, biopsy)
13 Disease Free, 11 By follow up, 2 by biopsy
3 recurrence, 6 disease free
12 Disease Free, 7 biopsy and 5 further imaging
Fig.3 Flowchart showing the results of the patients with discordant results between MRI and PET-CT in the primary site. while in green indicates correct identification compared to gold standard tests (follow up, biopsy and further imaging).
25 Discordance in neck area
PET-CT results
15 Full response
3 Residual disease
7 Equivocal
MRI Results
7 Residual disease
8 Equivocal
1 full response
2 Equivocal
4 Full response
3 Residual disease
Gold standard (clinical follow up, further imaging, biopsy)
15 Disease Free by follow up and further imaging
2 recurrence by neck biopsy, 1 disease free
7 disease free, 1 by neck dissection, 3 by biopsy, 1 by USS, 2 by clinical follow up
Fig.4 Flowchart showing the results of the patients with discordant results between MRI and PET-CT in the primary site. Text in red indicates incorrect identification, while in green indicates correct identification compared to gold standard tests (follow up, biopsy and further imaging).

3.png

Laryngectomy education and training packages: an environmental scan of the available resources

Poster

Ms. Laura-Jayne Watson [1], ***Ms. Emer Fahy*** [2], ***Prof. Linda Sharp*** [3], ***Mr. David Hamilton*** [3], ***Prof. Jo Patterson*** [1]

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Aim

Community healthcare is vital in supporting people with a laryngectomy once they are home, to support ongoing skill confidence, safety and adjustment (1).

Head and neck cancer (HNC) services in the UK are centralized; meaning that community input from HNC specialists is usually not available. Additionally, laryngectomy-specific education and training is often sporadic, inconsistent and varies from centre to centre, making it difficult to achieve standardisation in healthcare professionals' laryngectomy knowledge and skills.

Lack of knowledge and skills with limited community-specific laryngectomy education and training poses a significant risk to the safety and care of laryngectomy patients at home. We need to begin to address this problem, by having a better understanding of the current laryngectomy education and training.

This study aimed to identify and critically review the existing laryngectomy education and training packages for healthcare professionals, with a focus on community service provision.

Method

An environmental scanning method (2) was used to identify and review the existing laryngectomy education and training packages designed for healthcare professionals.

We included all available education/training packages which had an element of education and/or training applicable to laryngectomy care in community settings and were available in English. Any education and training packages unrelated to laryngectomy care or not available in English were excluded.

Scanning was conducted between September 2023 – January 2024. This included an electronic search of available education/training packages and grey literature, structured searches via Google and targeted websites. References/links were hand-searched. We also conducted stakeholder work with clinicians with known experience of developing laryngectomy education and training from Twitter searches or through research networks.

Data is currently being extracted and analysed by a synthesis formed by approaches from narrative synthesis and content analysis. Strengths and weaknesses will be grouped, and a gap analysis will be conducted.

Results

48/6,655 resources were eligible for review.

Structured searches of the literature yielded eleven articles from 2588 titles/abstracts screened. No additional articles were eligible for inclusion from hand-searching of the references. Targeted websites included NALC with 10/27 resources eligible for inclusion; and the NTSP with 9/192 resources eligible for inclusion. NALC and NTSP resources included a combination of written information, videos and e-learning modules.

Structured google searches in November 2023 resulted in a total of 3,825,000 results. The first 800 results were screened, resulting in a total of 111 eligible for inclusion. Duplicates were removed from these results, leaving a total of 21 resources for review.

241 tweets were screened from 2018-2023. Once duplicates were removed, a total of 3 tweets were eligible for review.

Data is currently being analysed fully - the results will be available for poster presentation at the conference.

Conclusion

To our knowledge, this is the first study to use an environmental scan to gather the available laryngectomy education and training packages which have applicability to community care. A directory of resources will be available with scope of use for patients, families and healthcare professionals. Findings will also inform the development of a community-specific laryngectomy education and training package.

Reference (if applicable)

1. Watson, L., Hamilton, D. and Patterson, J.M. (2022). Patient experience of the acute post□surgical period following total laryngectomy during the COVID□19 era. International Journal of Language & Communication Disorders. doi:https://doi.org/10.1111/1460-6984.12709.
2. Choo C. The art of scanning the environment. Bull Am Soc Inf Sci Technol 1999;25:21–4.

Late radiation-associated dysphagia (Late-RAD): A survey of practice of UK head and neck (H&N) specialist speech and language therapists (SLT)

Poster

Ms. Diane Sellstrom [1], ***Mr. James o'Hara*** [2], ***Prof. Tracy Finch*** [3], ***Prof. Catherine Haighton*** [3], ***Prof. Jo Patterson*** [4]

1. *New,* ***2.*** *The Newcastle Upon Tyne Hospitals NHS Foundation Trust,* ***3.*** *Northumbria University,* ***4.*** *Liverpool University*

Aim

There is currently no guidance on surveillance for late side effects in patients treated for head and neck cancer (HNC). Survivorship is a priority agenda yet evidence regarding optimum methods of identifying, assessing, and managing late effects is lacking. Symptoms often present after discharge from 5-year follow-up and progress slowly affecting eating, drinking, swallowing and nutrition. It is not well understood who will be affected or when. There are no available treatments to prevent or reverse symptoms and management tends to be supportive and focused on maintenance. Specialist HNC SLTs can provide an important role in the assessment and management of these symptoms. This survey aimed to establish existing practice among UK specialist SLTs and gather information regarding services available with a view to highlighting areas of agreement, disparity, and potential unmet need.

Method

A cross-sectional web-based survey was designed, piloted and distributed to UK H&N specialist SLTs. The survey was shared via known professional networks and relevant special interest groups as well as social media. Questions were asked regarding geographical location, work setting and existing services specific to late of effects of cancer as well as surveillance beyond 5 years. Further questions explored estimated referral numbers to SLT, methods of assessment, outcome measures used and management. The survey was open from Nov 2023-Feb 2024. Results were collated and closed questions analysed descriptively, and open-ended questions reviewed for common themes. The survey was approved by Newcastle University Ethics Committee (Ref: 35649/2023).

Results

Fifty-six SLTs responded with good geographical representation across the UK. Only 8.9% of respondents reported a dedicated late effects clinic in their region (all cancer groups). At least 13 referrals per year were reported by 39% and 37.5% estimated between 7-12 referrals per year.

Videofluoroscopy and FEES were used by most respondents 98% and 82% respectively. Twelve different PROMs were collected across the 25 respondents using them, MDADI the most frequently used (14/25). GRBAS and PSS were the most frequently used assessments (75%) and the WST was used by 71% (see figure 1).

Information about late effects was given by 71% post-treatment all within the first year. Open-ended responses suggested some units were in the early stages of planning to implement a service for late effects but with variation in professionals leading on this. Also, there was an acknowledged need to further investigate methods of earlier identification and management strategies.

Conclusion

Dedicated services for patients with late-RAD are sparse and there is variation in the outcome measures being used by SLTs. Some centres are offering patients ongoing review beyond five years but information about late effects tends to be given to patients early in the post-treatment phase and the format of this varies across the UK. There is agreement among SLTs that further guidance would be welcomed regarding optimal models of service delivery.

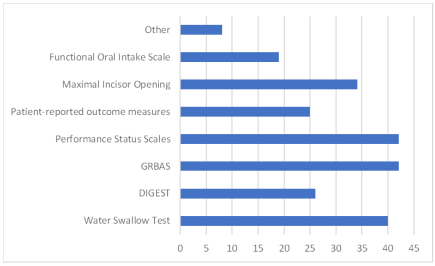

Figure 1 Outcome Measures Collected (% of respondents)

Outcome measures.png

Learning from co-designing an intervention with People with Laryngectomy from the Bengali community

Poster

Ms. Freya Sparks [1], ***Ms. Sabina Khan*** [2], ***Ms. Jusnara Khanom-Ahmed*** [3], ***Ms. Rhiannon Haag*** [4], ***Prof. Lucy Dipper*** [5], ***Dr. Margaret Coffey*** [6], ***Prof. Katerina Hilari*** [5]

1. *Barts Health NHS Trust / City, University of London,* ***2.*** *University College London Hospital,* ***3.*** *Barts Health NHS Trust,* ***4.*** *NORTH EAST LONDON NHS Foundation Trust,* ***5.*** *City, University of London,* ***6.*** *Imperial College Healthcare Trust*

Aim

People from minority ethnic groups are under-represented in research due to complex socio-cultural and linguistic barriers, which are upheld by inadequate researcher engagement strategies (1). Furthermore people from minority ethnic groups are less likely to report a positive experience of their cancer care (2). In the field of head and neck cancer, racial survival disparities exist (3, 4). This is pertinent in London, where 20% of head and neck cancers are from non-white groups (5). This study reports on engagement strategies used to include people with laryngectomy (PWL) from the east London Bengali community in co-design research.

After laryngectomy there are no existing therapeutic interventions to optimise tracheoesophageal voice (6) and research has not included PWL as stakeholders. This study reports on the co-design of a novel tracheoesophageal voice therapy approach in partnership with PWL from the east London Bengali community.

Method

Aims:

- To explore research strategies which support engagement of PWL from the Bengali community as co-design partners
- To work in partnership with Bengali PWL and SLTs to develop a tracheoesophageal voice therapy intervention
- To identify successful engagement approaches and future directions for continued co-design work

Methodology:

Three workshops were held with PWL from the east London Bengali community. Workshops were held in familiar community spaces and facilitated by multilingual AHPs using Sylheti, Bengali and English. Additional workshops were completed with SLTs and a separate group of PWL from other communities. Information was circulated between the groups by the facilitators in an iterative process. Recruitment strategies were targeted to optimise service user engagement. Co-design methods included brainstorming, open discussion, active trial of therapy approaches and review of existing resources.

Results

Three PWL from the east London Bengali community attended workshops as co-design partners. Co-design outcomes included identification of culturally-irrelevant assessment protocols and resources; and alternative solutions were proposed. Culturally specific opinions of healthcare and delivery of rehabilitation were explored and presented future directions for intervention development. Co-design partners proposed models of service delivery which could promote peer-befriending and community support with other PWL.

Conclusion

This study provides an example of practice aimed at increasing representation of Bengali service users in co-design research. Reflections on the approaches used to increase representation will inform continued service user involvement in the next phase of a tracheoesophageal voice therapy intervention development, which is

culturally appropriate and acceptable to PWL from the Bengali community. Learnings from this study can be adapted to other contexts with the aim of improving the inclusion of people from minority ethnic groups in research and service improvement.

Reference (if applicable)

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4. Mazul, AL. Chidambaram, S. et al (2022). Disparities in head and neck cancer incidence and trends by race/ethnicity and sex. Head and Neck, 45(1), 75-84
5. Tataru, D. Mak, et al. (2017). Trends in epidemiology of head and neck cancer in London. Clinical Oto-laryngology, 42(1), 104-114.
6. Sparks, F. Coffey, MC. et al (2023). Tracheoesophageal voice therapy in post laryngectomy rehabilitation: A systematic review. Journal of Voice, In press online

Lingual Artery: Mapping the Terrain in Trans-Oral Surgery - A Systematic Review

Poster

Dr. Nyla Razaq [1], ***Ms. Emma Watts*** [1], ***Dr. Alexandra Tong*** [1], ***Ms. Somiah Siddiq*** [1]

1. *University Hospitals Birmingham*

Aim

The most feared complication in tongue base resections is the potential for severe, life-threatening haemorrhage resulting from inadvertent injury to the lingual artery, related to depth-dependent exposure. Trans-oral surgery necessitates an 'inside-out' understanding of regional anatomy, requiring an alternative consideration of surgical landmarks for effective lingual artery identification. Additionally, challenges arise from the distortion and increased variability of anatomical landmarks due to soft tissue movement, intraoperative tongue protrusion, and compression.

This systematic review aims to critically review and identify clinically relevant methodological themes and approaches for trans-oral surgeons to construct a mental map of the lingual artery to support safer resection of tongue base tumours.

Method

A comprehensive search, of MEDLINE, Embase, Scopus, and Cochrane databases from July 1 1997 to July 1 2023 was conducted. Publications restricted to lingual artery identification in the context of an 'inside out' approach or a transoral perspective were included. Pre-clinical animal model studies were excluded. Extracted data included participant demographics, ease and reproducibility of methodological techniques and potential clinical applicability.

Results

The search strategy identified 82 publications, of which 14 articles met inclusion criteria. Two studies assessed impact on the lingual artery with the tongue in both the resting and protruded position and one in the exposed-retracted position. Thematic analysis identified pre-operative imaging techniques (CT angiography), topographical landmarks, anatomic morphometric data and real time intra-operative ultrasound in identification of the lingual artery. Increased body mass index, male gender and increasing age demonstrated statistically significance anatomical variation. Surgical safe zones are primarily defined through a combination of anatomic cadaveric and/or radiologic correlates. Consistent relationships are reported between the hyoid and stylohyoid ligament. The lingual point was consistent irrespective of lingual artery depth or tongue position.

Conclusion

The anatomical discordance between pre-operative imaging (acquired in a neutral position) and primarily cadaveric studies lacking tongue retraction in the absence of pathology limit clinical applicability. However, radiologic-anatomic correlate studies support topographical landmarks.

In cases where tumour position obscures surface landmarks, referencing the contralateral tongue base is useful. The lingual point, in conjunction with the greater cornu of the hyoid, serves as an operative safety milestone and paired with high-definition 3D views prompts deliberate pace during meticulous dissection.

Pre-operative CT angiography may be of use in select cases where suspicion is high for lingual artery involvement and embolization favoured in the recurrent tongue base cancers where salvage neck dissection is not warranted. Intra-operative ultrasound has a crucial role in more challenging cases. The potential of augmented reality, aiming to superimpose intra-operative images onto the robotic console for enhanced guidance during transoral surgery is an area of ongoing research.

Long-term functional outcomes following laryngectomy and flap reconstruction: A 24 year single-centre study.

Poster

Ms. Nina Saeed [1], ***Ms. Sarah Al-Himdani*** [1], ***Ms. Maleeha Mughal*** [1], ***Mr. Eamon Francis*** [2], ***Ms. Jane Dunton*** [3], ***Ms. Ellen Tromp*** [1], ***Ms. Natasha O'Neill*** [1], ***Mr. Aleix Rovira*** [3], ***Mr. Asit Arora*** [3], ***Mr. Jean-Pierre Jeannon*** [3], ***Mr. Ricard Simo*** [3], ***Mr. William Townley*** [1], ***Mr. Richard Oakley*** [1]

1. *Guys and St Thomas NHS foundation trust,* ***2.*** *St. James's Hospital,* ***3.*** *Guy's & St Thomas' NHS Foundation Trust*

Aim

Approximately 2000 cases of laryngeal and hypopharyngeal cancer are diagnosed in the UK each year[1]. Total Pharyngolaryngectomy (TPL) and Total laryngectomy (TL) are the standard surgical procedures indicated in the management of patients with advanced laryngeal malignancies. In patients with recurrence following chemoradiotherapy or with significant laryngeal dysfunction, salvage laryngectomy is performed.[2]

These procedures are associated with significant morbidity and reconstructive aims include to enable early dietary and well as speech restoration and rehabilitation to improve patients quality of life.

The aim of this study is to explore outcomes in our patients undergoing flap reconstruction (pedicled and free) following TPL or TL.

Method

A retrospective review was carried out including all patients who underwent either circumferential or partial pharyngolaryngectomy with free or pedicled flap reconstruction at a large tertiary referral center. Data was collected from the electronic patient records (EPR), EPIC system, dietician and speech and language therapy databases. We performed a systemic analysis of patient demographics, tumour characteristics, length of inpatient stay, reconstruction technique, reconstruction complications, voice quality, time to feed, type of feed and dysphagia.

Results

A total of 225 patients underwent flap reconstruction following pharyngolaryngectomy, between 1999-2023. Of the 225, 19 (8%) were female and the rest male (92%).

The indications were: primary laryngeal or hypopharyngeal SCC (52%), salvage laryngectomy (43%) and functional laryngectomy (5%).

The flaps used included : free anterolateral thigh (60%), pedicled pectoralis major (19%), ALT and PM (10%), MSAP (6%,) with the remaining flaps being MSAP, RFF, DIEP, colon flaps and gastric pull ups.

Tracheo-oseophageal puncture and prosthesis insertion was undertaken in 87 patients.

Conclusion

Vascularised soft tissue reconstruction of the pharynx is feasible with satisfactory results. Most patients regain speech and swallowing function. Swallowing outcomes are poorer in patients with more extensive disease involving the pharynx.

Reference (if applicable)

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Lung adenocarcinoma with thyroid metastasis: a rare case

Poster

Mr. Ilyas Mustafa [1], ***Dr. Barbara Carey*** [1], ***Dr. Martina Munonyara*** [1], ***Dr. Benita Stevenson*** [1], ***Dr. Ann Sandison*** [1], ***Mr. Aleix Rovira*** [2]

1. *Guys and St Thomas NHS foundation trust,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust*

Aim

Metastases of a primary lung cancer to the thyroid gland are extremely rare accounting for 2 to 4% of all clinical cases (1). The most common primary cancers including kidney, breast, lung, gastrointestinal, melanomas and lymphomas. The prognosis is poor (2). Here we present a case of thyroid metastases secondary to a lung primary.

Method

A 50-year-old gentleman of Algerian origin was referred over to the head and neck department with a right supraclavicular lump. He had minimal weight loss and no night sweats. His past medical history included treated spinal tuberculosis (TB) and ataxia telangiectasia. He was a non-smoker and consumed no alchohol. The patient then underwent ultrasound-guided fine needle aspirate cytology (USG-FNAC) of the thyroid and lymph nodes.

Interestingly, the patient presented acutely a few weeks later to A/E with difficulty breathing with a complete whiteout of his chest due to a large pleural effusion. It was only then cytology for pleural and performed a bronchoscopy with bronchial washings. CT was neck and chest were also conducted to further assess the aetiology of this pleural effusion.

Results

USG-FNAC of the thyroid and lymph nodes demonstrated a population of highly atypical malignant epithelioid cells, together with the immunophenotype [cytoplasmic positivity for AE1/3, nuclear positivity for TTF1 and negative for thyroglobulin] were judged as suspicious for poorly differentiated carcinoma. PAX8 was negative in these samples.

This case was reviewed at the Head and Neck MDTM and the possibility of a lung primary was raised based on the CT findings of a large right main bronchus soft tissue mass associated with liver metastases and possible adrenal metastases. PET-CT showed bone metastases.

The bronchoalveolar lavage and pleural fluid contained malignant cells showing a similar cytomorphology and immunoprofile to that seen in the original thyroid aspirate. Immunohistochemistry showed these cells expressed NapsinA, TTF1 positivity and PAX8 negativity, supporting a diagnosis of primary lung adenocarcinoma.

This was discussed at the lung MDTM and the patient was commenced on Alectinib under medical oncology.

Conclusion

There is diagnostic complexity in establishing the primary cancer in cases with unusual distribution of metastases and this case report demonstrates the fundamental role of the MDTM; correlation of clinical, radiological and cytomorphological features were key in establishing the correct diagnosis and appropriate treatment. The distinction between primary and secondary thyroid tumours is important to determine staging and treatment.

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Major Head and Neck Free Flap Surgery in the Independent Healthcare Sector

Poster

Ms. Diana Norinho [1], ***Mr. Rafal Niziol*** [1], ***Mr. Mustansir Alibhai*** [1], ***Mr. Zaid Awad*** [1], ***Mr. Jonathan Bernstein*** [1], ***Mr. Asit Arora*** [1], ***Mr. George Christodoulides*** [1], ***Mrs. Sarah Manjaly*** [1], ***Mrs. Clare Park*** [1], ***Ms. Dawn Wilson*** [1], ***Ms. Georgia Puckett*** [1], ***Ms. Iona Bell*** [1], ***Ms. Denise Oliver*** [1], ***Ms. Kate Cason*** [1], ***Mr. Steve Bellingham*** [1], ***Mr. Alastair Fry*** [1]

1. *Cromwell Hospital, London*

Aim

Performing complex major head and neck surgery with free flap reconstruction is major undertaking in any setting. To perform this safely and successfully requires significant infrastructure and multidisciplinary team working. This has previously been felt to be difficult to achieve in the independent sector.
We have reviewed 42 consecutive head and neck free flap cases performed at the Cromwell hospital, London in a 12 month period from October 2022 - October 2023 and present the key outcomes.

Method

42 patients underwent major head and neck surgery with free flap reconstruction in a 12 month period at The Cromwell hospital, a private hospital in London with 82 inpatient beds and a 10 bed ICU. The Cromwell hospital treats a mixture of UK and International Patients . All patients were discussed first at The Cromwell hospital specialist Head and Neck Cancer MDT - with Oncology, Surgery, Pathology, Radiology, SLT, Dietetic and CNS input.

Key outcomes were prospectively audited including any complications eg flap failures and returns to theatre, and readmissions.

Results

42 consecutive patients underwent major head and neck surgery with free flap reconstruction at the Cromwell hospital between October 2022 and October 2023.
23 fibular flaps performed, 12 Radial forearm flaps, 2 scapulars, 3 ALT perforator flaps, 1 LD flap and 1 DCIA flap.
The average length of stay was 13.7 days (Range 7-36 days)
4 unplanned returns to theatre (9.5%) - 1 flap failure (2%), 1 partial failure - partial skin loss, 1 haematoma (2%), 1 debridement of tongue tip. There were no mortalities.
1 patient was discharged with a RIG tube, the rest had resumed sufficient oral diet.
There were 3 readmissions within 30 days (7%) - 2 patients for Chest infection, 1 for Donor site wound infection.
There were no perioperative mortalities
All patients, where applicable, made post operative radiotherapy at 6 weeks

Conclusion

This data from the Cromwell hospital represents the largest volume of Major Head and Head and Neck Free Flap cases performed in the private sector in the UK in a 12 month period.
The outcomes compare favourably with national data and demonstrate that complex head and neck surgery performed in the Independent sector is safe, when the infrastructure is sufficient and a high level of Multidisciplinary team working exists.

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Management of pseudomonas infection in head and neck free flap patients: a case series and systematic review

Poster

Mr. Munir Abukhder [1], ***Mr. Amrish Chandegra*** [2], ***Dr. Joanna Ismail*** [3], ***Mr. Axel Sahovaler*** [1], ***Mr. Adrian Farrow*** [1], ***Ms. Clare Schilling*** [1]

1. *University College London Hospital,* ***2.*** *Luton and Dunstable Hospital,* ***3.*** *King's College London*

Aim

Pseudomonas aeruginosa (PA) is a significant contributor to postoperative infections due to its aggressive nature and biofilm-forming ability. Untreated infections may lead to complications such as free flap failure, returns to theatre, and delays in adjuvant radiotherapy initiation. This retrospective study explores the use of diluted 0.5% acetic acid (AA) washouts as an adjunctive treatment for eradicating PA in this patient cohort.

Method

This study was retrospective in nature. Patients considered eligible had ablative and reconstructive surgery involving microvascular free tissue transfer, positive pseudomonas MC&S samples and underwent washouts of the contaminated site with diluted 0.5% AA. A systematic review protocol was registered with PROSPERO and reported in accordance with the Preferred Reporting for Items for Systematic Reviews and Meta-Analyses (PRISMA). Comprehensive electronic search strategies for four bibliographic databases were developed by a librarian. Studies were screened by two independent reviewers.

Results

In a cohort of six eligible patients (mean age=63.34 years), undergoing ablative and reconstructive surgery with microvascular free tissue transfer, positive pseudomonas cultures, and surgical washouts with diluted AA, we observed no flap failures. Osteocutaneous free flap was utilised in four cases. PA infections were confirmed in all cases, leading to return to theatre in four patients (mean days post-op=20.5; range=5-44). Two patients required a two-week AA washout course, while the remaining patients were effectively treated within one-week. Intravenous antibiotics were utilised in all patients based on sensitivities of cultures taken. No relevant studies conducting a similar intervention were identified in our search.

Conclusion

Acetic acid is an easily available, non-toxic, and inexpensive topical agent. It can be successfully utilised in the treatment of PA infected surgical sites post-operatively in the head and neck.

Managing Lymphoedema Following Treatment for Head and Neck Cancer: Is Complete Decongestive Therapy an Effective Intervention to Improve Dysphagia Outcomes? A Service Evaluation

Poster

Ms. Alison Smith [1]

1. *University Hospitals Coventry & Warwickshire*

Aim

As the incidence of head and neck cancer (HNC) is increasing with the Human Papilloma Virus (HPV), patients are living for longer with late effects of HNC treatment, including chronic swallowing (dysphagia) impairments and head and neck lymphoedema (HNL). HNL is often poorly defned and under reported in the literature in comparison to its counterpart in limbs, but more recently has found that up to 90% of HNC survivors will be affected. Complete Decongestive Therapy (CDT) is the Gold Standard treatment for lymphoedema elsewhere in the body, and emerging evidence supports the use of CDT for treating secondary lymphoedema of the head and neck. It is vital to understand how the presence of HNL impacts on the swallow, and if functional dysphagia outcomes improve following treatment. This case report explores the design and testing of an individually tailored programme of CDT to explore the impact of this on dysphagia outcomes.

Method

A single centre, prospective service evaluation conducted at University Hospitals Coventry & Warwickshire aims to gather preliminary data to design and test an individually-tailored programme of HNL intervention, to evaluate dysphagia outcomes post CDT. Patients will receive tailor-made compression garments, self and clinician-led manual drainage, skincare, and exercises with a Macmillan Speech and Language Therapist who is also dual trained as a Certified Lymphoedema Therapist.

Recruitment completed. Data analysis in progress. Photographs, size, texture, and severity of HNL is assessed at multiple face and neck landmarks. Standardised functional dysphagia and quality of life outcome measures will all be collected at initial assessment, 3, and 12 months. Thematic analysis will be used to analyse patient feedback via a qualitative feedback questionnaire which will be provided on completion of treatment at 12 months.

Results

Preliminary outcome data taken from one participant who has completed treatment, demonstrated total circumference of the neck reduced over 12 months by 9.7%. All facial and neck water % content measures reduced from baseline to 3 months. Overall, the right face and neck showed the greater overall improvement of reduction in volume and texture compared with the left side which is clearly demonstrated in digital images. This is consistent with the original left sided malignancy, requiring a higher field dose of radiation and surgical excision on the left side. Facial surface tape measurement totals did not differ significantly over time points with the exception of right face from baseline to 3 months.

Dysphagia results were mixed. Dysphagia outcomes demonstrated an improvement in social participation, QOL, and an overall improvement in functional swallowing ability from baseline to 3 months. Patient's goals changed over time as she reached her dysphagia rehabilitation ceiling.

Conclusion

There are many psychosocial factors and barriers to treatment in a HNC patient cohort, that influence realistic rehabilitation goals and prognosis of HNL. Intervention outcomes can be significant, but are closely related to compliance in long term rehabilitation which is notoriously low in this group. HNL can be challenging, yet rewarding to treat. It requires an individualised, creative and flexible approach to intervention. The results of this case example reveal there are undoubtedly improvements in cosmesis and composition of the HNL, but the benefits and impact of these improvements on a patient are context dependent and meaningful in ways that cannot be assumed the higher priority by the treating clinician eg removal of a feeding tube. Goals may change over time as a patient reaches their ceiling of rehabilitation, and therefore long term expectations and goals need to be as flexible as the intervention you are recommending.

Figure 2.png

Margin Status in Oral Squamous Cell Carcinoma – single centre audit

Poster

Dr. Sejal Bhundia [1], ***Ms. Clare Schilling*** [1], ***Dr. Bilaal Mirza*** [1], ***Dr. Rebecca Exley*** [1]

1. *University College London Hospital*

Aim

Resection margins are likely to be influenced by various factors as outlined by BAHNO 2016 Guidelines, including:

- Tumour stage
- Surgical site
- Cancer type
- The need to spare essential structures

Effective margin control is essential to minimize risk of disease recurrence, with no universally agreed upon expected rates for clear margins. West Scotland's QIP has suggested a <10% rate of involved margins. BAOMS' (British Association of Oral and Maxillofacial Surgeons) QOMS (Quality Outcomes in Oral and Maxillofacial Surgery) data provides us with an opportunity to benchmark against national standards, hence this review.
This audit explores margin control rate in a single tertiary referral head and neck surgery unit at UCLH. The UK Royal College of Pathologists' margin classification of clear (≥5mm), close (1-4.99mm) and involved (<1mm) were used to correlate with pathological T stage, anatomical subsite and performance against national QOMS BAOMS data.

Method

All OSCC surgical cases between 2021-2023 were retrieved from the UCLH QOMS database, totalling to 240 cases. This data was contemporaneously collected by UCLH's Head and Neck Data Manager and was subsequently compared to previously published national QOMS data.
Subsites included in this study were:

- Alveolar ridges of the maxilla
- Alveolar ridges of the mandible
- Buccal mucosa
- Retromolar trigone
- Floor of mouth
- Tongue
- Palate

Subsites not included were:

- Lip

The pathological T stage was correlated with the marginal status (involved, close or clear) for the closest deep margins and closest mucosal margins. This UCLH data was compared with national BAOMs DATA.
The marginal status was also measured against the oral cavity subsites listed above.

Results

Please see Attachment A for tables of results.

Clear margins dominate in T1/T2, with T3/T4 indicating more close margins. Certain subsites show slightly higher proportion of involved margins (FOM). Overall, both datasets show <10% involved margins, meeting the aforementioned target.

Conclusion

This audit correlates higher T stages to increased close and involved margins, with exceptions indicated in cases where vital structures are essential to preserve. Comparative BAOMS data shows UCLH aligns with national standards, highlighting BAOMS' utility for national benchmarking. The study focuses on primary tumours and margins, excluding survival rate exploration, acknowledging nodal status impact.

This audit highlights the importance of monitoring resection margins data, to identify whether our head and neck centre is performing against national data.

BAOMS DATA (2022-2023)

Pathologic T stage	Closest deep margin			Closest mucosal margins		
	Involved	Close	Clear	Involved	Close	Clear
T1	8	80	147	7	113	119
T2	15	63	105	12	75	97
T3	18	59	66	7	51	86
T4(a+b)	29	38	62	15	56	60
Total	76 (6.6%)	242 (20.9%)	387 (33.4%)	45 (3.9%)	300 (25.9%)	370 (31.9%)

UCLH DATA 2021-2023)

Pathologic T stage	Closest deep margin			Closest mucosal margins		
	Involved	Close	Clear	Involved	Close	Clear
T1	4	19	57	2	12	68
T2	3	29	41	1	12	63
T3	5	26	14	0	7	38
T4(a+b)	7	16	21	2	10	32
Total	19 (3.9%)	90 (18.4%)	133 (27.2%)	5 (1%)	41 (8.3%)	201 (41.1%)

Attachment a - results.png

Merkel cell carcinoma metastasis to the palatine tonsil

Poster

Mr. muhammad alvi [1], ***Dr. Ann Sandison*** [1], ***Mr. Joaquin Yanes*** [1], ***Mr. Aleix Rovira*** [2], ***Mr. Ricard Simo*** [2], ***Mr. Richard Oakley*** [1], ***Dr. Michael Green*** [1]

1. *Guys and St Thomas NHS foundation trust,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust*

Aim

Merkel Cell Carcinoma (MCC) is a rare and aggressive neuroendocrine cancer, that is associated with Merkel Cell Polyoma Virus (MCV) in 80% of case [1]. It most commonly presents as a cutaneous skin lesion in sun exposed areas, accounting for 0.8% of cutaneous skin cancers but carrying a mortality of 46% [2]. Up to 50% of patients present with lymph node metastases without an identifiable primary [3]. Metastatic tumours to the palatine tonsils are rare representing only 0.8% of palatine tumours. We present a case report of a patient presenting with Merkel cell carcinoma, associated with polyoma virus, presenting with metastasis to the palatine tonsil and axilla.

Method

A 67 year old female, normally fit and well with no previous history of cancer, presented to breast surgery clinic with a history of a painful lump in the left breast. On examination no breast lump was seen however a suspicious left axillary lymph node was detected. An ultrasound guided biopsy of the left axillae demonstrated features of a high grade metastatic carcinoma which was negative for breast primary and melanoma. The patient was discussed at the cancer of unknown primary (CUP) MDT and a PET-CT scan was arranged. PET-CT revealed increased focal uptake in the left palatine tonsil with no obvious primary identified. The patient was referred in the head and neck clinic for clinical review. Clinical review revealed a hard fixed mass in the left tonsil. The patient was then booked in for a tonsillectomy. Intra-operatively the left tonsil was suspicious for malignancy in the inferior pole.

Results

Histopathology demonstrated similar appearances to axillary biopsy. Immunostaining was diffusely positive for CK8/18 and CK20 with para nuclear dot positivity and strongly positive for p16. The tumour was negative for CK5/6, CK7, p63 and TTF1. The tumour showed widespread positive staining for neuroendocrine markers synaptophysin and CD56 and chromogranin is negative. Immunostaining for polyoma virus was positive. The morphology and immune-profile taken together with the positive result for polyoma virus was deemed compatible with a diagnosis of metastatic Merkel cell carcinoma. Metastatic Merkel cell carcinoma to tonsil has been reported previously but the incidence is very rare. The patient was referred to the oncologists for consideration of radio and chemotherapy.

Conclusion

Metastatic MCC to the tonsil is extremely rare with only case reports in the literature. MCC presents without an obvious primary cutaneous lesion in a large proportion of patients (ref) and there is evidence that these patients have a more favourable prognosis. Primary sites may regress due to immune mediated mechanisms [3]. In this patient the CUP MDT was involved early and a PET-CT organised which led to identification of the tonsillar metastases and onward referral to the head and neck. This highlights the importance of coordination between MDTs. Immunostaining was positive for polyoma virus. Further research is needed on the role of polyoma virus in atypical presentations of MCC.

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Modern Survival Trends in Laryngeal Cancer: Insights from the Northern Head and Neck Cancer Alliance Retrospective Audit

Poster

Mr. Amarkumar Rajgor [1], ***Ms. Rhona Hurley*** [2], ***Mr. Jemy Jose*** [3], ***Mr. Winson Wong*** [3], ***Mr. Shane Lester*** [4], ***Ms. Sara Sionis*** [5], ***Ms. Katharine Davies*** [6], ***Mr. James O'Hara*** [7], ***Ms. Helen Cocks*** [8], ***Prof. Terry Jones**** [9], ***Ms. Catriona Douglas*** [10], ***Mr. David Hamilton*** [1]

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Aim

Despite significant changes in the treatment of laryngeal cancer, there has been little improvement in oncological outcomes over the past three decades. The Northern Head & Neck Cancer Alliance was established in 2022, under the auspices of the Northern Health Sciences Alliance. It is a collaboration of nine high throughput head and neck cancer centres in the north of England and Scotland, dedicated to research collaborations.

This study aims to present survival outcomes among patients diagnosed with laryngeal cancer in the Northern region of the United Kingdom.

Method

Retrospective data were compiled for 2401 patients with laryngeal cancer from six head and neck centres in Northern UK (Newcastle, Glasgow, Liverpool, Sheffield, Leeds, and Middlesbrough) between 2015 and 2021. Only patients managed with curative intent were included in this study (n=2028). The collected data encompassed demographic details, TNM stage, treatment modality received and time to mortality or follow up. Kaplan-Meier survival analyses were employed for comprehensive survival assessments.

Results

The study included 2028 patients with laryngeal cancer who received curative-intent treatment. There was a mean age of 66.8, male predominance (81%) and median follow-up time of 40 months. 53% (n=1075) underwent non-surgical management (chemoradiotherapy or radiotherapy), whilst 47% (n=952) underwent surgical management.

The 5-year estimated overall survival (OS) rate was 57.1%. For early (T1-2) and advanced (T3-4) disease, the estimated 5-year OS rates were 64.4% and 48.5% respectively. Even in T2 disease the 5-year OS was 54.5%.

The 5-year disease-specific survival (DSS) rates for T1, T2, T3 and T4 staged cancer were 91.6%, 77.3%, 68.7% and 59.7% respectively.

Conclusion

This collaborative study demonstrates survival outcomes similar to those reported in literature from 25 years ago, underscoring the stagnation in laryngeal cancer research progress[(1)]. The findings emphasise the need to shift focus from determining treatment superiority to embracing precision medicine for defining treatment pathways in this disease.

Laryngeal cancer demands a fresh approach, potentially exploring innovative diagnostic techniques, therapeutic strategies, and efforts to mitigate healthcare disparities. There is a need for increased focus on improving the quality of life for these individuals, given the concerning overall survival rates.

Effective collaboration, extending across regions, is crucial for advancing such research goals, with the Northern Head & Neck Cancer Alliance poised to play a pivotal role in this collective effort.

Reference (if applicable)

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Multi-speciality, dual-site robotic surgery in a single-session for synchronous primary malignancies

Poster

Mr. Shaun Selvadurai [1], ***Mr. Aleix Rovira*** [1], ***Mr. Jean-Pierre Jeannon*** [2], ***Mr. Asit Arora*** [1]

1. *Guy's & St Thomas' NHS Foundation Trust,* ***2.*** *Guys and St Thomas NHS foundation trust*

Aim

Robotic surgery is an increasingly multi-disciplinary tool, utilised by multiple specialities to perform minimally invasive cancer resections. Dual-site resections in a single-session, represent an alternative to sequential procedures in patients with synchronous primary malignancies, potentially improving associated post-operative morbidity and timing of adjuvant oncological therapies. Few cases have been reported, with the vast majority undertaken by a single surgical team within the abdomen or pelvis. We present two cases of dual-site, multi-speciality, single-session robotic surgery, involving transoral robotic surgery (TORS), performed at Guy's Hospital.

Method

A 49 year-old male presented with an immobile neck lump. Imaging and biopsies confirmed a metastatic human papilloma virus (HPV) positive, left tonsillar squamous cell carcinoma (SCC), with a synchronous lung adenocarcinoma. The morbidity of dual-site chemoradiotherapy or open surgery presented a management challenge. Sequential robotic resections in a single-session was opted for, with the head & neck and thoracic team performing TORS lateral oropharyngectomy and robot-assisted pulmonary lobectomy respectively. The patient was discharged after 6 days. Adjuvant radiotherapy commenced within 3 weeks.

Results

A 76 year-old male, with a previously excised right calf melanoma, presented with an immobile neck mass. Imaging and biopsies confirmed a metastatic HPV positive, right tonsillar SCC, with a synchronous malignant melanoma found in a left iliac lymph node. Sequential robotic resections were performed in a single session with the head & neck and urology team performing TORS lateral oropharyngectomy and robot-assisted pelvic lymph node dissection respectively. The patient was discharged after 3 days. Close tumour margins warranted further oral resection. Adjuvant radiotherapy was started within 6 weeks of initial surgery.

Conclusion

Undertaking TORS in the same session as robot-assisted thoracic and urological surgery is feasible and safe. While this approach presents its own surgical and anaesthetic challenges, it may reduce morbidity associated with multiple general anaesthetics, and allow faster adjuvant oncological therapy and a greater chance of cure.

Multicentre Outcomes for Drain-free Parotid Surgery

Poster

Dr. Chelsea Chan [1], ***Mr. Derek Ly*** [2], ***Ms. Rukmini Ghosh*** [2], ***Mr. Mohamed Mansuri*** [2], ***Mr. Raguwinder (Bindy) Sahota*** [2], ***Mr. Jaiganesh Manickavasagam*** [1]

1. *NHS Tayside,* ***2.*** *University Hospitals of Derby and Burton*

Aim

This retrospective cohort study examined outcomes of drainless, day-case parotidectomies in NHS Tayside and the University Hospitals of Derby and Burton NHS Foundation Trust.

Method

Data from drainless, day-case parotidectomies were collected from 2018 to 2024 and compared with data from parotidectomies using drains from 2017-2018. These data was collated from operative lists and operation notes from NHS Tayside and the University Hospitals of Derby and Burton.

Results

74 patients were analysed in the drainless cohort, with an incidence of 1 small haematoma (1.4%), 12 post operative infections (16.2%), 0 instances of post-operative facial weakness, 14 instances of a development of a sialoma, and 1 complication of Frey's Syndrome (1.4%). This was compared to the 65 patients in the drain cohort, which showed an incidence of 3 haematomas (4.6%), 5 cases of post-operative infection (7.7%), 2 instances of post-operative facial weaknesses (3.1%), 4 instances of a development of a sialoma (6.2%), and 2 complications of Frey's Syndrome (3.1%).

Of the 74 drainless patients, 62 (83.8%) were able to be discharged the same day, and the remainder went home the next day, all within 23 hours.

Conclusion

These data will continue to be collected and analysed over the next 3 months, however the existing data set shows drain-free parotid surgery to be a safe and more sustainable alternative to parotid surgery with drains.

Multimodal Analgesia following Trans-oral Robotic Surgery for Oropharyngeal Squamous Cell Cancer: A systematic review

Poster

Dr. Ololade Obadare [1], ***Ms. Arusha Khan*** [2], ***Ms. Grace Ngoie*** [2], ***Ms. Emma Watts*** [1], ***Ms. Somiah Siddiq*** [1]

1. *University Hospitals Birmingham,* ***2.*** *Aston University, Birmingham*

Aim

Transoral Robotic Surgery (TORS) is an established minimally invasive modality for treating early-stage oropharyngeal squamous cell cancer (OPSCC). Current post-operative analgesia regimens lack contiguity, risking delayed resumption of oral intake with associated complications, and potential impact on length of stay (LOS). This systematic review aims to identify and critically evaluate the efficacy of multimodal analgesia (MMA) following TORS.

Method

In accordance with PRISMA guidelines, we conducted a systematic review of PubMed, EMBASE, Cochrane, Scopus, and clinicaltrials.gov databases. Studies meeting inclusion criteria included those with clear documentation of postoperative MMA for acute pain in adult patients undergoing TORS for OPSCC. Cochrane's *Risk of Bias in Non-randomized Studies of Interventions* and *Risk-of-Bias* tools were used to assess the risk of bias and study quality. Data was extracted pertaining to participant characteristics, pain scale and scores, MMA composition, opioid consumption, and length of stay.

Results

The search strategy identified 141 publications, of which seven studies (548 patients) met inclusion criteria. Postoperative MMA composition included combinations of Acetaminophen ($n = 6$), Non-Steroidal Anti-Inflammatory Drug (NSAID) ($n = 5$), Tramadol ($n = 4$), Gabapentin ($n = 4$), Morphine ($n = 3$), Oxycodone/Hydrocodone ($n = 3$), Codeine ($n = 3$), Dexamethasone ($n = 2$), and Fentanyl ($n = 1$). Two studies found MMA significantly reduced pain scores, leading to an overall reduction in opioid consumption. Only two studies reported swallow evoked pain scores. Dexamethasone use demonstrated significant pain reduction on postoperative day 3 compared to placebo ($p = 0.004$) in a single study. NSAID use did not increase bleeding risk. Where LOS was reported ($n = 3$) two studies reported no significant difference, with a 1-day LOS reduction in the remaining study.

Conclusion

Within the limitations of this small body of evidence of predominantly retrospective studies, MMA appear to significantly reduce postoperative pain scores and opiate consumption. Both NSAID and Dexamethasone appear efficacious and safe in MMA, whilst the benefit of Gabapentin post-operatively remains to be defined. The significant heterogeneity of MMA regimens and use of variable pain scales limit comparison to advise on optimal MMA.

Consensus is vital for defining TORS-specific functional (swallow) pain composite endpoints, including resumption of oral diet, emphasizing minimal clinically important differences over mean pain scores. Quantifying opioid-sparing benefits through reduced adverse effects and reporting proportion of MMA responders is crucial for meaningful clinical interpretation. These efforts are essential to standardize and inform future randomized control trial design defining optimal TORS-specific MMA.

Nasendoscopy as a tool to facilitate management of partial closure of the posterior end of a tracheosophageal tract in a post-laryngectomy patient: a single case study

Poster

Ms. Gavriella Simson [1], ***Ms. Lauren Murphy*** [1], ***Dr. Gemma Clunie*** [1], ***Dr. Katerina Karamali*** [1], ***Mr. Jonathan Bernstein*** [1], ***Dr. Margaret Coffey*** [1]

1. *Imperial College Healthcare Trust*

Aim

Surgical voice restoration, placement of a silicone voice prosthesis into a surgically created tracheosophageal puncture (TEP) site, remains the gold standard for re-establishing voice following laryngectomy [1]. Voice prosthesis placement may result in complications including partial closure of the posterior end of a TEP [2, 3]. Early identification of voice prosthesis complications is essential to minimising the need for surgical intervention and a sustained period without voice. To date there is limited evidence to support the use of instrumental assessments in facilitating problem solving of voice prosthesis complications [2].

Aim:

To describe a single case study outlining how nasendoscopy was used as a tool to facilitate management of partial closure of the posterior end of a TEP.

Method

Three nasendoscopies were performed by the speech and language therapists (SLTs) on a laryngopharyngectomy patient with pectoralis major reconstruction over a 10 day period. This facilitated the management of partial closure of the posterior end of a TEP. The nasendoscope was passed through the nasopharynx and advanced into oesophagus to the level of the TEP, to facilitate assessment of the voice prosthesis and surrounding tissues. Following each nasendoscopy, images from the evaluation were reviewed by ENT colleagues to facilitate multidisciplinary discussion about next management steps.

Results

Nasendoscopy 1: Inconsistencies in TEP length were obtained using standard procedures. Nasendoscopy following insertion of sizer confirmed incomplete placement in the oesophageal lumen. This facilitated an understanding of the complexities of accurately sizing TEP in this case and enabled voice prosthesis placement.

Nasendoscopy 2: Following patient report of deterioration of voice, nasendoscopy evaluation confirmed voice prosthesis not full through to oesophageal lumen. Placement of a catheter was recommended but declined by the patient as he would be unable to vocalise.

Nasendoscopy 3: Patient presented with extruded voice prosthesis. Following attempts to insert a voice prosthesis, nasendoscopy confirmed it was not possible to place the voice prosthesis all the way through to the oesophagus due to partial closure of posterior TEP. Nasendoscopy subsequently also confirmed placement of an 8Fr nasogastric tube in the oesophagus enabling preservation of the TEP.

A voice prosthesis was subsequently placed under general anaesthetic.

Conclusion

This case study describes the use of nasendoscopy as a tool to facilitate identification of partial closure of the posterior end of a TEP and to facilitate management such that the TEP could be preserved. Nasendoscopy facilitated timely management as it allowed SLTs to communicate effectively and quickly with ENT. Timely management was important to the patient as the lack of voice impacted on his quality of life, work and family commitments. Further research would be beneficial to further explore the use of nasendoscopy in the management of voice

prosthesis complications.

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NHS Long term plan for early diagnosis of oropharyngeal cancers: taking the bull by the horn

Poster

Dr. Aashlesha Sardesai [1], ***Dr. Heraa Islam*** [1], ***Ms. Jabin Thaj*** [1], ***Dr. Praveen Surya Ravichandran*** [2]

1. *Barking, Havering and Redbridge NHS Trust,* ***2.*** *Barking Havering Redbridge University Hospital NHS trust*

Aim

Oropharyngeal carcinoma encompasses roughly 25% of all the Head and Neck Carcinomas. In recent years there has been a tremendous growth in the diagnostic and therapeutic modalities for oropharyngeal carcinomas. However, there has been no substantial evidence of improved prognosis in spite of these advances. Delay in diagnosis and lack of accuracy are the major contributing factors to the unsatisfactory prognostic outcomes.
The aim of our study was to study and analyze the delays associated with presentation, diagnosis, and management of patients presenting with oropharyngeal cancers and to reduce the delays in keeping with the NHS long term plan for early stage cancer diagnosis from 50-75% and to have 55,000 more people survive their cancer for at least 5 years following diagnosis.

Method

In our retrospective-descriptive study we collected data from 2018-2022 of all the patients who received treatment for oropharyngeal cancers at our trust. A total of 24 patients satisfied the inclusion criteria. The data collected incorporated their presentation, social reasons for delay, comorbidities, clinical and pathological staging, diagnostic scans, HPV status, and treatment provided.

Results

Most of the patients were diagnosed at an advanced stage with T3 or T4 stage disease as is expected with the anatomic peculiarities of the oropharynx resulting in delayed presentation. The most significant part of the delay was the first contact with a healthcare professional. Further delays were observed at each step including presentation, HPV testing, PET scan, and commencing treatment.

Conclusion

Subsequent to scrutinizing our data, our recommendations include the following, 1. A high degree of suspicion for any unilateral sore throat, requesting MRI scan for persistent unilateral sore throat 2. Imaging patients that present with asymmetry of tongue base 2. Accelerating the HPV diagnostic pathway. To start early treatment. We intend to complete the loop after putting these strategies in place. We believe these measures will be conducive to early diagnosis and commencement of treatment which will in turn enhance the prognosis and improve the caliber of patient care.

Optimising prevention and management of hypocalcaemia following thyroidectomy: Audit and quality improvement project

Poster

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Aim

Hypocalcaemia following total thyroidectomy is a common complication, occurring in up to 18.3% of cases based on UK Registry of Endocrine and Thyroid Surgery [1]. Suspicious or malignant thyroid nodules, based on cytological classification, are amongst the main indications for total or completion thyroidectomies.

We aim to present our institutional experience regarding post-thyroidectomy hypocalcaemia prevention and management, through an audit of adherence to the current British Association of Endocrine and Thyroid Surgeons (BAETS) guideline and implementation of strategies to improve patient outcomes.

Method

A retrospective audit of total and completion thyroidectomies in adults (n=30, May to October 2023) was conducted to define practice baseline in our high-volume tertiary centre. Primary outcome measures include: preoperative baseline laboratory tests, preoperative and postoperative prophylactic supplementation and postoperative calcium and PTH checks. Secondary outcomes were the identification of potential risk factors such as post-operative pathology and intra-operative parathyroid glands identification and preservation. All patients completed a minimum follow up period of 2 weeks post-operatively.

Results

Initial adherence to current BAETS guidelines for postoperative calcium and PTH checks within 12 hours was 93.3% and 86.7% respectively. 67% of patients underwent total/completion thyroidectomy for malignancy. Post operative prophylactic calcium and vitamin D supplementation was prescribed in 80% of patients. Incidence of hypocalcaemia at 24 hours and 2 weeks postoperatively was 23.3% and 6.7% respectively. In the latter group, all patients were female, who underwent total thyroidectomy and neck dissection for malignancy. Subsequently, changes were implemented, including development of local guidelines, pre-formed laboratory order set and pre-operative checklist. A re-audit will be followed to reassess adherence.

Conclusion

Thyroid malignancy, total thyroidectomy and neck dissection are identified as significant risk factors for development of postoperative hypocalcaemia [2]. This quality improvement project provides a foundation for effectively enhancing adherence to guidelines and current best practices, while minimising the risk of severe hypocalcaemia, ultimately reducing hospital stay and preventing potential life-threatening complications. Despite our current adherence of over 85%, we were actively implementing improvements. A forthcoming reaudit will assess the impact of these changes, ensuring sustained progress in optimising patient outcomes.

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Optimum PTV margins for Oropharyngeal cancer patients undergoing radical radiotherapy with IMRT.

Poster

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1. *Mount Vernon Cancer Centre*

Aim

Although Intensity Modulated Radiotherapy (IMRT) has improved toxicity profile in Head and Neck Radiotherapy, it is vital to ensure planning Target volume (PTV) margins are optimum to maintain adequate coverage of Clinical Target Volumes (CTVs). The aim of the study was to find out whether current 5mm CTV to PTV expansion is covering the CTVs adequately throughout the course of treatment. If the PTV margins could be safely reduced further, it could potentially improve the toxicity profile. Hence, if the current PTV margins are found to be adequate, we also aimed to check whether 3mm CTV to PTV expansion would adequately cover CTV with current set up.

Method

Randomly selected 10 Oropharyngeal cancer patients who completed radical Radiotherapy between January to December 2022 at Mount Vernon Cancer Centre with 65Gy to primary and 54Gy to elective volumes. Weekly cone beam CTs of these patients were fused with diagnostic MRI and planning CT. CTVp65(CTV primary 65) and CTVp54 (CTV primary 54)were delineated on all cone beam sets per patient using both fused MRI and planning CT. Recalculations were done on all cone beam sets by running original IMRT plans with CTV-PTV expansion of 5mm. D100% and D99% for CTVp65 and CTVp54 and D95% for PTVp65 (PTV primary 65) and PTVp54 (PTV primary 54) were calculated. Criteria set for adequate target coverage included: D100 or at least D99 for CTVp65 ≥ 95% (61.75Gy), D100 or at least D99 for CTVp54 ≥ 95% (51.3Gy), D95 for PTVp65 ≥ 95% (61.75Gy) and D95 for PTVp54 ≥ 95% (51.3Gy).

Results

6 cone beam set calculations were carried out for the 10 patients. 2 patients were omitted from final analysis due to major discrepancies with CTVs among different cone beam sets and planning CT. None of the patients met D100 ≥95% for CTVp65 in all weekly cone beam sets. D99 for CTVp65 was ≥ 95% in 6 out of 8 patients (75%). It was not met in one cone beam set in one patient and two in the other one. CTVp54- D100 ≥ 95% was met in 5 out of 8 patients (62.5%). This was not met in one cone beam set in two patients and two in one patient. CTVp54-D99 ≥95% was met in 100% of patients. PTVp65 D95 ≥ 95% was not satisfactorily met in all cone beam sets in any of the patients. PTVp54 D95 ≥ 95% was met in only 2 out of 8 patients (25%).

Conclusion

Current CTV- PTV expansion of 5mm is not satisfactorily meeting the set standards. This could be related to issues with set up which needs to be addressed and needs further evaluation. Daily cone beam CT for patients might help to reduce errors with set up. Introduction of 6 DOF couch can potentially improve set up. CTV-PTV margin can't be reduced to 3mm at this point.

Limitations

Target volume delineation in cone beam CT is challenging due to poor soft tissue delineation and problems with image registration due to set up variations and changes in tumour volume during treatment. Dose calculation is also not an accurate representation of actual dose delivered because cone Beam CT will be covering only part of treatment volume. Furthermore, changes in tumour volume and body contour during treatment due to factors

like weight loss and treatment response can affect dose distribution.

Outcomes following management of squamous cell carcinoma of the scalp in the West of Scotland.

Poster

Dr. Sabrina Tengku [1], ***Mr. John Biddlestone*** [1], ***Mr. J. Jeff Downie*** [1], ***Prof. James A. McCaul*** [1]

1. *NHS Greater Glasgow and Clyde*

Aim

Cutaneous Squamous Cell Carcinoma (cSCC) is a globally prevalent malignancy, escalating with an aging population and prolonged sun exposure. Tumours of the scalp account for 10-20% of lesions affecting the head and neck, and 2% of all skin cancers. Despite being common, literature on the management and outcomes of scalp-specific cSCC is sparse. This study, conducted in the West of Scotland, analyzes patient characteristics and outcomes post-management of scalp cSCC. Special attention is given to the deep margin of excision, its management strategies, and their impact on outcomes. We present the largest single case series in the literature for cSCC of the scalp.

Method

A retrospective review of patients with a histological diagnosis of primary squamous cell carcinoma of the scalp treated with curative intent in the West of Scotland between 2012 - 2018 was performed. Patients were identified from pathological diagnosis at our central laboratory. Patient characteristics, tumour characteristics, high risk features, treatment modality, deep and peripheral excision margins and outcomes including survival and recurrence data were recorded. The End Point for follow up was 60 months.

Results

Our study encompasses a cohort of >450 cases, with over 80 patients annually, diagnosed with primary squamous cell carcinoma of the scalp. Comprehensive patient demographic and treatment data are available, with treatment modalities including surgery (with and without adjuvant radiotherapy), primary radiotherapy, and calcium electroporation. All cases adhere to the RCPath minimum dataset for pathology parameters.
We describe patient and tumour characteristics and treatment modalities carried out. Data on margin clearance in surgical cases, with specific reference to tumour depth and deep margin management strategies including a comparative analysis against disease recurrence and survival is provided.

Conclusion

Patients diagnosed with cSCC of the scalp form an elderly cohort with prevalent comorbidities. Scalp cSCC exhibits lower rates of regional metastasis compared to other head and neck sites, and metastatic cases carry a poor prognosis. Our study presents the most extensive case series in the literature specific to cSCC of the scalp, shedding light on the unique characteristics and challenges associated with this specific anatomical location.

Outcomes following oropharyngeal bleeding in patients with previously treated head and neck cancer

Poster

Ms. Bhargavi Chandrasekar [1], ***Mr. Jeffrey Lancaster*** [1]

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Aim

Patients with a history of treated head and neck cancer presenting with upper aerodigestive bleeding in emergency scenarios present a distinct clinical challenge. Appropriate management hinges of a comprehensive understanding of the patient's oncological and medical history and rapid assessment of current clinical status to evaluate prognosis and guide decision-making. The underlying cause of aerodigestive tract bleeding may not be apparent at the time of presentation.

Previously regarded as a terminal event, the introduction of endovascular procedures, has altered the landscape for this cohort of patients. Recent data on head and neck cancer bleeding has therefore focused on outcomes following endovascular intervention. However such treatment is reserved for patients who can be successfully stabilised and the underlying etiology influences long-term prognosis. We therefore aim to evaluate the management and outcomes of patients with previously treated head and neck cancer who present with emergency upper aerodigestive tract bleeding.

Method

A retrospective review was performed at our tertiary head and neck centre (2008 – 2023). Patients who had not completed primary treatment for the head and neck cancer or bleeding from sources other than upper aerodigestive tract were excluded.

Results

Thirty-three patients were included encompassing various etiologies including known recurrence/residual disease (33%), osteoradionecrosis (18%), and dual pathology (3%). 15 patients (45%) had no confirmed pathology before the episode of major bleeding. Management strategies included medical treatment (12%), arterial embolization or stenting (18%) and surgical intervention including tracheostomy, endoscopy with haemostasis, and/or vessel ligation (18%). 6 patients (18%) underwent both surgical and endovascular procedures whilst 8 patients (24%) had palliative decisions forgoing intervention. The 30-mortality rate was 53% and 35% respectively for patients without a confirmed prior diagnosis, and who had undergone surgical and/or endovascular treatment.

Conclusion

Our findings highlight the complexity of managing previously treated head and neck cancer patients presenting with upper aerodigestive bleeding. We discuss factors influencing the outcomes to help guide decision making for this challenging patient population.

Overview of scoping project looking at the Late Effects service provision in the Community Head and Neck Team

Poster

Ms. Katie Lee [1]

1. Guy's & St Thomas' NHS Foundation Trust

Aim

•Propose a model including recommendations of a patient co-designed LE's service provision
•Recommendation/ creation (time dependent) of patient involved clinical information leaflets .
•Upskilling CHANT clinicians and wider MDT around the symptoms and management of LE's

•Identifying how intervention for this LE's population differ from the current patient pathway

Method

Over range of means (research, clinician discussion, focus groups) investigate what an optimal late effects service requires and should look like.
Discuss these with range of clinicians including consultants and patients in order to create recommendations of a patient led late effects service.

Results

Main outcome is that patients like current service provision
Identified other areas where support can be provided to patients upon discharge to flag any concerns and come back to CHANT for a review - leaflet creation, feedback in health and well being days
Provided recommendations for scoping of subsequent projects including acupuncture for xerostomia to support long term symptoms.

Conclusion

Current CHANT service provision for patients presenting with late effects is what patients expect and like.
Need to increase awareness of late effects post discharge in order to highlight to patients that they should be flagging any concerns or deterioration in weight/neck/shoulder/mouth or swallow function ASAP.
Recommendations from above scoping project also includes further projects around accupunture and photobiomodulation therapy for xerostomia and fibrosis.

Palliative hypofractionated palliative radiotherapy for locally advanced head and neck cancer: 25Gy in 5 fractions – an effective, efficient palliative strategy

Poster

Dr. Muhammad Shahid Iqbal [1], ***Dr. Rahul Patil*** [1], ***Ms. Laura Mackenzie*** [1], ***Mr. Nick West*** [1], ***Dr. Josef Kovarik*** [1], ***Dr. Malcolm Jackson*** [1], ***Dr. Charles Kelly*** [1]

1. *The Newcastle Upon Tyne Hospitals NHS Foundation Trust*

Aim

A significant number of head and neck cancer (HNC) patients present at an advanced stage and a considerable proportion are not candidates for curative treatment, either due to disease or patient characteristics. Palliative radiotherapy is often indicated but, there is no standard regimen of palliative radiotherapy in HNC [1] and practice varies significantly [2]. Since the publication of our systematic review [1], we started using hypofractionated palliative radiotherapy, 25 Gy in 5 daily fractions using intensity modulated radiotherapy (IMRT) based on evidence in a phase II trial [3].

We examined our institutional experience of using this hypofractionated regimen in HNC using IMRT. The primary aim was to assess tolerability and response of this innovative dose/fractionation and a secondary outcome was to assess overall survival.

Method

From December 2017 to June 2023, 261 HNC patients were treated with this hypofractionated course, using 25 Gy in 5 daily fractions with IMRT, at our centre. The data collected retrospectively included patient demographics, disease characteristics (TNM 8th edition), treatment completion rates, the incidence of grade 3 or above treatment–related toxicity, response to treatment, and survival. All patients had at least 6 months follow-up period, after completion of radiotherapy.

Results

Patient median age was 71 years (range:37-96) and male-to-female ratio 72:28. Performance status (PS) was recorded in 87% patients; PS1 26%, PS2 34%, PS3 26%. Oropharynx was the predominant subsite (27%), followed by paranasal sinus/nasal cavity (17%), hypopharynx and oral cavity (13% each), larynx (8%), others (17%). 70% patients had T-stage 4, 14% T3 and 10% T2. 66% patients were with ≥N2 disease. Metastatic disease was confirmed in 15% patients. HPV was positive in 12% patients. 95% patients completed radiotherapy. The vast majority of patients tolerated treatment well with only 6% patients developing grade 3 toxicity. There was no grade 4 toxicity nor any treatment-related death. Response was available in 117 patients (clinically in 89 patients and radiologically in 26). Disease progression was documented in 71% of patients, mainly locoregional (89%). Median overall survival (OS) was 9 months. 1-year OS was 44.6% and 2-year OS was 24.8% (Figuire1).

Conclusion

We present our institutional experience of world's largest series of using short course, (over one week), hypofractionated palliative regimen using IMRT. Treatment completion rate was very high (95%) and treatment was well tolerated with 94% of patients not developing any significant treatment-related toxicity. The survival rates were higher than the previously reported studies using various radiotherapy dose/fractionation regimens [1].

To conclude, whilst accepting the limitation of lack of information on patients' symptoms/quality of life, our study demonstrates good tolerability and improved survival outcomes in this patient population. The option

of palliative radiotherapy still has a valuable role in managing this patient population especially when immunotherapy is only available for patients with PS 0/1 (in our study, 60% patients were with PS ≥2). Further prospective work incorporating quality of life evaluation is warranted.

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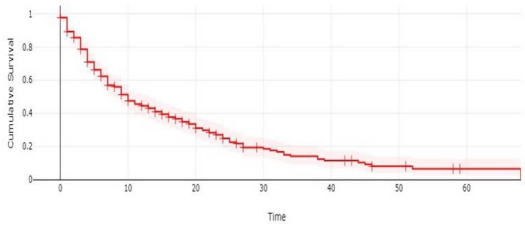

Figure1: Kaplan Meier overall survival analysis for the whole patient cohort

Figure1.jpg

Patients' and healthcare professionals' perceptions of a feasibility study investigating a patient-centred approach to exercise for head and neck cancer survivors: A qualitative study

Poster

Dr. Gemma Cherry [1], ***Ms. Debra Fisher*** [1], ***Prof. Adrian Midgley*** [2], ***Dr. Andrew Levy*** [2], ***Prof. Simon Rogers*** [3], ***Dr. Rachel Brooker*** [4], ***Mrs. Valerie Bryant*** [5], ***Dr. Jennifer Kirton*** [1], ***Dr. Steven Lane*** [1], ***Mr. Michael Nugent*** [6], ***Ms. Ruth Price*** [7], ***Prof. Andrew Schache*** [7], ***Prof. Bridget Young*** [1], ***Prof. Joanne Patterson*** [1]

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Aim

There are significant benefits to engaging in physical exercise before, during and after head and neck cancer (HNC) treatment, but most HNC patients have low levels of physical activity pre- and post-treatment. The ACTIOHN clinical trial was a phase II feasibility trial of a personalised physical exercise intervention for HNC patients that was fully personalised, collaborative, and flexible to participants' needs. Using Normalisation Process Theory (NPT) as an analytic framework, this paper reports the results of a nested qualitative study examining patient and staff perceptions of the ACTIOHN study and factors influencing acceptability and integration in routine clinical practice.

Method

Semi-structured interviews were conducted with 17 patients who had been approached to participate in ACTIOHN, and 11 healthcare providers involved in trial delivery. Participants were purposively sampled according to demographic and clinical characteristics, trial uptake and compliance and job role. Patient interviews focused on the acceptability of the intervention, study processes and applicability of outcome measures; staff interviews covered assessments and programme delivery, usability of the study materials and intervention tools, and acceptability of the mode and timing of intervention delivery. Interviews were audio recorded and transcribed verbatim; analysis drew on the framework approach, with findings mapped to NPT constructs.

Results

Key issues hindering the normalisation of the programme within clinical practice related to the internalisation, initiation and activation, and contextual integration constructs of the model. Patients valued the flexible, personalised nature of the programme, but patients who did not self-identify as 'exercisers' found it difficult to understand the personalised aspect of the programme until it began, and some declined the trial as a result. Staff highlighted the need for more education regarding the benefits of activity and its 'fit' with HNC treatment to aid implementation and their own understanding of the programme. Communication between staff and patients was integral to continued engagement, particularly for patients whereby coherence was poor, but the sustainability of responsive communication was unclear. Practical issues (e.g. use of logbook, fit of programme around side effects of HNC) also impacted negatively on the normalisation of the programme and resulted in withdrawal for some patients.

Conclusion

Patients and staff largely valued a personalised approach to physical exercise for HNC patients. NPT aided in the identification of barriers and facilitators to integration of the ACTIOHN programme into routine clinical

practice. These data are of critical importance as the ACTIOHN trial progresses towards a definitive phase III study.

PEG data and outcomes driving service change in head and neck cancer

Poster

Mrs. Andriana Petrova [1], ***Dr. Anna Thompson*** [1], ***Dr. Atia Khan*** [1]

1. *North Middlesex University Hospital*

Aim

NMUH has a prophylactic gastrostomy (pPEG) protocol for patients with head and neck cancer (HNC) treated with radical radiotherapy, with tube placement in the second week of radiotherapy. A service evaluation in 2023 showed 21% (N=12) of patients with a pPEG didn't use it. Most of those who did, started using it after the fourth week of treatment. Moreover, the idea of a PEG often causes anxiety, and many patients don't want it[(1)]. Thus, our protocol changed to promote shared decision-making (SDM) based on discussions about benefits and risks of pPEGs versus a reactive approach, including potential hospital admissions with the latter. The procedure moved to week 3 or 4 of radiotherapy, to allow time for decision-making and in some cases to see toxicities trajectory and patients coping mechanisms.

The aim of this project was to assess the effectiveness of SDM and assess its impact on clinical and nutritional outcomes.

Method

Patients treated with radical radiotherapy at NMUH between October 2022 and December 2023 were identified using Aria. Digital outpatient clinical records were reviewed. All patients recommended a pPEG were included and were split into those who had a pPEG and those who opted for a reactive approach. Exclusion criteria included not being recommended a pPEG, PEG placement secondary to pre-existing dysphagia or malnutrition, peri-operative PEG placement and presence of clinical contraindications to a pPEG.

Data was recorded and analysed on Excel. Primary outcomes were number of patients who opted for reactive approach, number pPEG not used during treatment, number of reactive tube placements and number of admissions related to nutritional status and to pPEG complications. Secondary outcomes were % weight loss and cost-implications associated with SDM. The cost of the pPEG device was identified from the local procurement system. Additional costs associated with the procedure and staffing were not measured.

Results

82 patients were identified of which 47 met the inclusion criteria. 34% (N=16) opted for a reactive approach. 66% (N=31) proceeded with a pPEG, of whom 13% (N=4) didn't use it, compared to 21% (N=12) the previous year. There were 4 admissions in the pPEG group related to either procedure or pPEG complications compared to only 6% (N=1) in the reactive group, who required an admission and a reactive nasogastric tube placement. All patients completed the planned course of radical radiotherapy.

The mean % weight loss was 6% in the pPEG and 4% in the reactive group and the median weight loss was 6% (N=31, range 2% gain - 15% loss) and 3% (N=15 due to missing information, range 0% - 12% loss), respectively.

SDM led to 16 pPEGs not being placed equal to £4248 savings (£265.50/device). However, the savings from the procedure, medications and endoscopy time are far greater.

Conclusion

Protocols regarding placement of pPEGs in HNC are based on primary tumour location, stage and radiotherapy fields [(2)]. However, effective MDT work needs to include SDM and patients' views and preferences [(3)].

We found that SDM and postponing the pPEG procedure led to reduced number of pPEGs placed, without a significant increase in hospital admissions or a negative impact on nutritional and clinical outcomes. More-

over, there was a higher percentage of admissions related to pPEG complications than to the reactive approach. This change resulted in a third of the patients avoiding potential risks associated with a PEG procedure, fewer patients having a pPEG who didn't use it and led to overall cost savings.
As a result, our trust will continue to use an SDM-guided PEG service offering both prophylactic and reactive approach. Future plans include assessing the impact of this change on patients' quality of life and satisfaction.

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Postoperative bleeding following TORS :Systemic review and meta-analysis

Poster

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Aim

Trans-Oral Robotic Surgery (TORS) has become increasingly popular as a primary treatment modality for early-stage oropharyngeal and laryngeal cancers. Postoperative haemorrhage is the most feared complication of TORS. Various factors like tumour staging, prior radiation, and the use of perioperative coagulation may increase the chance of bleeding. Prophylactic transcervical arterial ligation (TAL) is an increasingly adopted technique used to theoretically decrease the risk of postoperative haemorrhage.

Method

Articles which mentioned the rates of postoperative haemorrhage and the use of prophylactic TAL were included in this study. The team reviewed for a correlation between prophylactic arterial ligation and its impact on postoperative haemorrhage. A secondary focus of this study was finding other risk factors for haemorrhage within these publications and also to find the incidence of overall and major haemorrhage following laryngeal TORS and this was compared with the oropharyngeal TORS

Results

18 articles were reviewed with a total of 5411 TORS patients. In 5 of the articles with a total of 1109 TORS patients, 226 had TALS with an incidence of overall haemorrhage and major haemorrhage of 7.5% and 1.1% respectively. Similarly, there were 843 non-TAL patients of which the incidence of overall haemorrhage and major bleeds were 8.7% and 5.5% respectively. Also, within 3 of the articles reviewed with a total of 610 TORS patients, the overall haemorrhage of 104 patients that had prior radiotherapy was 15.4% while that of 506 patients without prior radiotherapy was 8.5%. Furthermore, with regards to the effect of anticoagulants, 4 studies with a total of 910 showed a 16.2% incidence of overall haemorrhage among 197 anticoagulated patients and 6.0% among 713 non-coagulated patients.

Conclusion

Transcervical arterial ligation decreases the incidence of major or severe postoperative haemorrhage but does not have any significant impact on the overall haemorrhage rate. Large tumours, patients with prior radiation, and use of preoperative anticoagulants are associated with an increased risk of postoperative haemorrhage. Major haemorrhage incidence in laryngeal TORS was similar to oropharyngeal

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Postoperative bleeding following TORS :Systemic review and meta-analysis

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Abstract:

Objective: Trans-Oral Robotic Surgery (TORS) has become increasingly popular as a primary treatment modality for early-stage oropharyngeal and laryngeal cancers. Postoperative haemorrhage is the most feared complication of TORS. Various factors like tumour staging, prior radiation, and the use of perioperative coagulation may increase the chance of bleeding. Prophylactic transcervical arterial ligation (TAL) is an increasingly adopted technique used to theoretically decrease the risk of postoperative haemorrhage.

Study design: Systemic review and meta-analysis of published literature was performed using PubMed, WebofScience, Cochrane, WileyOnlineLibrary and ScienceDirect databases.

Methods: Articles which mentioned the rates of postoperative haemorrhage and the use of prophylactic TAL were included in this study. The team reviewed for a correlation between prophylactic arterial ligation and its impact on postoperative haemorrhage. A secondary focus of this study was finding other risk factors for haemorrhage within these publications and also to find the incidence of overall and major haemorrhage following laryngeal TORS and this was compared with the oropharyngeal TORS

Results: 18 articles were reviewed with a total of 5411 TORS patients. In 5 of the articles with a total of 1109 TORS patients, 226 had TALS with an incidence of overall haemorrhage and major haemorrhage of 7.5% and 1.1% respectively. Similarly, there were 843 non-TAL patients of which the incidence of overall haemorrhage and major bleeds were 8.7% and 5.5% respectively. Also, within 3 of the articles reviewed with a total of 610 TORS patients, the overall haemorrhage of 104 patients that had prior radiotherapy was 15.4% while that of 506 patients without prior radiotherapy was 8.5%. Furthermore, with regards to the effect of anticoagulants, 4 studies with a total of 910 showed a 16.2% incidence of overall haemorrhage among 197 anticoagulated patients and 6.0% among 713 non-coagulated patients.

Conclusion: Transcervical arterial ligation decreases the incidence of major or severe postoperative haemorrhage but does not have any significant impact on the overall haemorrhage rate. Large tumours, patients with prior radiation, and use of preoperative anticoagulants are associated with an increased risk of postoperative haemorrhage. Major haemorrhage incidence in laryngeal TORS was similar to oropharyngeal

Keywords: TORS, transcervical arterial ligation, postoperative haemorrhage

Postoperative bleeding following tors 2.jpg

Presenting nutritional status within a cohort of oropharyngeal head and neck patients prior to commencing chemoradiotherapy at a regional oncology centre

Poster

Ms. Clare Roberts [1], ***Mrs. Lorna Wilson*** [1], ***Ms. Karen O'Hare*** [1]

1. *The Christie NHS Foundation Trust*

Aim

It is well documented that head and neck (H&N) patients are at high risk of malnutrition, both at diagnosis and at any stage of their treatment journey. Previous research has shown that up to 60% of H&N pts are malnourished, prior to undergoing any form of cancer treatment (Ravasco et al., 2005).

With the increasing prevalence of p16-positive H&N tumours, we are seeing a change in patients presenting nutritional status. The incidence of malnutrition at presentation appears to be decreasing, reflecting the link between p16-positive SCC in younger patients of higher socioeconomic status with healthier lifestyle choices (Lewis et al., 2010).

Taking this into account, we decided to review the presenting weight loss and BMI of a cohort of patients with the aim of assessing prevalence of malnutrition and compare this to existing data.

Method

We retrospectively assessed the nutritional status of 50 H&N oropharyngeal patients planned for chemoradiotherapy. Data collected included BMI, presenting percentage weight loss and p16 status.

We used the following 3 criteria to define a patient as malnourished: a BMI of less than 18.5 kg/m^2 or unintentional weight loss greater than 10% within the last 3–6 months or a BMI of less than 20 kg/m^2 and unintentional weight loss greater than 5% within the last 3–6 months (NICE, 2006).

Results

For our cohort of 50 patients, 8% presented as malnourished.

Further analysis of our data revealed the following:

BMI range was 14.4 to 45.3 kg/m^2, with a mean of 27.8 kg/m^2, median of 27.1 kg/m^2 and mode of 27 kg/$m^{2.}$

Weight loss range was 0-16%, with a mean of 1.2%, median of 0% and mode of 0%.

86% were p16-positive.

Conclusion

Compared to previous studies, our rates of malnutrition at presentation are much lower at 8%. This could reflect the evolving presentation of a contemporary cancer population.

We acknowledge that our cohort are all undergoing chemoradiotherapy, a naturally fitter patient group with a high prevalence of p16-positive cancers. This rules out those who are less fit, with a potentially higher rate of malnutrition at presentation.

Although not typically malnourished at baseline, the needs of the p16-positive patient bring their own unique challenges, as do overweight/obese patients, undergoing radical treatment for H&N cancer.

Our small study is a starting point for further research, including analysis of a larger cross section of H&N patients across all treatment modalities.

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Primary mode of communication for people with total laryngectomy in the United Kingdom: a cross-sectional survey

Poster

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Aim

People with total laryngectomy (PTL) are unable to produce laryngeal voice due to removal of the larynx and redirection of the airway to a permanent neck tracheostoma.

Post-operative communication options include: surgical voice restoration (SVR), electrolarynx, oesophageal speech, silent articulation, writing and text-to-speech applications. In the United Kingdom (UK) it is recommended that SVR is offered routinely to all eligible patients, as part of laryngectomy rehabilitation (Clarke et al. 2016). There are several reasons why SVR may not be offered and, moreover, SVR requires specific maintenance, care, and regular VP changes, which can involve multiple, and sometimes unplanned, hospital attendances (Kress et al. 2014; McLachlan et al. 2021).

The rate of SVR uptake in the UK is unknown, however, making it difficult to benchmark services. This study aimed to report on the United Kingdom (UK) rate of surgical voice restoration (SVR) usage and investigate factors that influence its uptake.

Method

A national multi-centre audit of people with total laryngectomy (PTL) was completed over a six-month period (March to September 2020) in response to the Covid-19 pandemic (Govender et al. 2021).

This is secondary analysis of the data collected, focusing on primary communication methods and factors that may have influenced this prior to and during the pandemic. Living circumstances were collected to indicate opportunities for communication on a regular basis and during the lockdown period. Information on distance from the centre was collected as this may impact on opportunity for SLT-led voice prosthesis management. Information on time post-surgery was collected given available communication options have changed over time. Data on type of humidification used and incidence of Covid-19 infection was also collected and are reported independently of this paper (Dunton et al. 2023).

Results

Twenty-six centres across the UK submitted data for analysis, totalling 1216 PTL. Details of the participating centres and patient demographics are summarised in Table 1.

Data on SVR use was available for 1196 PTL. The cohort consisted of 970 males and 226 females with a mean age of 69.6 years (range 28-97 years). Median number of months post-laryngectomy was 71. A total of 852 PTL (71%) used SVR; 344 used an alternative type of communication method although specific details were not collected. Factors associated with SVR in the multiple regression analysis (Table 2) were:

- Sex (p=0.003); 63% of females using SVR compared to 73% of males (p=0.01).
- Employment (employed vs. not employed p<0.001); only 127 patients (11%) were employed at the time of data collection. Seventy eight percent of these were SVR users. The largest sub-group were retired SVR users (71%).
- Time post-laryngectomy (p<0.001)

Conclusion

This study offers the largest exploration of alaryngeal communication method used by PTL in the UK and provides an important benchmark. SVR is funded by the NHS in the UK but this is not the same in all countries, hence, this may influence the rate of uptake outside of the UK.

Seventy one percent of PTL use SVR as their primary communication method, which is comparable to data reported in other countries, e.g. Australia. Sex, employment status and time post-laryngectomy surgery were all found to be statistically significant factors in SVR usage. None of the other variables (age, living circumstances or distance from treatment centre) were predictive.

SVR has always been presented as the 'gold' standard of communication rehabilitation but with the increasing age of the population, accumulative prevalence of comorbidities, and growing proportion of increasingly complex laryngectomy surgeries - should this claim be maintained?

Reference (if applicable)

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TABLE I
Patient characteristics grouped by SVR vs non-SVR usage

Characteristic	Total Group (1196)	SVR	No SVR	p value
Sex ***				**0.01**
Male	970 (81%)	709 (73%)	261 (27%)	
Female	226 (19%)	143 (63%)	83 (37%)	
Living circumstance ***				0.07
Living with someone	763 (64%)	548 (72%)	215 (28%)	
Lives alone	385 (32%)	278 (72%)	107 (28%)	
In care facility	26 (2%)	11 (42%)	15 (58%)	
Missing/Other	22 (2%)	12	10	
Distance from centre ** *				0.82
< 5miles	315 (26%)	230 (73%)	85 (27%)	
5-10 miles	367 (31%)	264 (72%)	103 (28%)	
11-20 miles	280 (23%)	194 (69%)	86 (31%)	
>20 miles	228 (19%)	161 (71%)	67 (29%)	
Missing	6 (1%)	3	3	
Employment				**<0.001**
Employed	127 (11%)	111 (78%)	16 (22%)	
Retired	820 (68%)	580 (71%)	240 (29%)	
Sick leave	21 (2%)	13 (62%)	8 (38%)	
Unemployed	83 (7%)	54 (65%)	29 (35%)	
Missing /Other	145 (12%)	94	51	
Age * (mean, SD)				0.40
	69.6 (10.1)	69.6 (10.1)	69.4 (10.8)	
Time post-laryngectomy (months) **				**0.001**
	71 [28-140]	98 [31-144]	79 [15-113]	

Summary statistics are *mean (std dev) ** median (IQR) or ***counts (%).

Table 1.png

TABLE 2
Variables Associated with SVR from Multivariable Logistic Regression. Hosmer and Lemeshow goodness of fit test p>0.05. Employment variable was dichotomised into employed and not employed due to small numbers in some cells.

Variable	β	Std Error	Odds ratio	95% CI	P value
Sex	0.55	0.18	1.7	1.2-2.5	0.003
Months post-laryngectomy	0.004	0.001	1.0	1.0-1.0	<0.001
Employment status	1.19	0.29	2.9	1.7-5.2	<0.001

Table 2.png

Primary T3 laryngeal squamous cell carcinoma: real-world data from a large NHS cancer centre (2016-2022)

Poster

Ms. Jasmine Handford [1], ***Mr. Ricard Simo*** [2], ***Dr. Charlotte Moss*** [3], ***Dr. Beth Russell*** [1], ***Prof. Mieke Van Hemelrijck*** [1], ***Mr. Jean-Pierre Jeannon*** [2]

1. *King's College London,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust,* ***3.*** *Kings College London*

Aim

Larynx squamous cell carcinoma (SCC) represents 30-40% of head and neck cancer cases. T3 larynx cancer is often treated with organ-preserving protocols, including non-surgical modalities, with treatment decision-making closely dependent on patient-related factors. Understanding the real-world outcomes of such approaches is beneficial. We aimed to characterise the T3 cohort at Guy's and St Thomas' NHS Foundation Trust (UK) and describe oncological outcomes after curative first-line treatment, with specific focus on primary radiotherapy (RT) vs. chemoradiotherapy (CRT).

Method

Data on patients diagnosed with primary larynx SCC between 01/01/16–31/12/22 was extracted from electronic health records. Descriptive statistics and cox proportional hazard regression were used.

Results

Of N=267 patients with primary larynx SCC, N=91 (34%) presented with T3 tumours. Most were male (N=73, 80%), of White ethnicity (N=65, 74%), current/ex-smokers (N=88, 97%) and in the lowest two quintiles for socioeconomic status (N=50, 55%). This appeared representative of the wider larynx SCC cohort. Most T3 patients were treated curatively (N=67, 74%), of which N=43 (64%) with CRT, N=17 (25%) with RT, and N=7 (10%) with surgery. Median overall survival (OS) for the T3 cohort was 43 months, with 1-year and 5-year OS of 87% and 41%, respectively. After adjusting for age, nodal status, and performance status the hazard ratio (HR) for RT vs. CRT was 4.64 (95% CI 1.24-17.37).

Conclusion

In this real-world setting, most T3 patients were treated with primary oncological modalities rather than surgery. Patients undergoing RT appeared to have poorer survival outcomes than CRT, although we acknowledge the limitations of a small sample size. Further investigations into mediators and selection mechanisms are required.

Prognostic factors and the role of adjuvant radiotherapy in non-melanoma skin cancer of the head and neck with lymph node metastasis- A retrospective study of outcomes in a single, high-volume centre.

Poster

Mr. Shaun Selvadurai [1], ***Mr. Joaquin Yanes*** [2], ***Mr. Aleix Rovira*** [1]

1. *Guy's & St Thomas' NHS Foundation Trust,* ***2.*** *Guys and St Thomas NHS foundation trust*

Aim

Non-melanoma skin cancer (NMSC) is the most common cancer worldwide. 80-90% of NMSC occurs on sun-exposed regions of the head and neck (H&N). The majority of lesions are low risk, treated with surgical excision, and are associated with a high cure rate and acceptable cosmetic outcomes. 5% of patients with NMSC will have clinicopathologic features that predict for an increased risk of local and regional recurrence, and rarely, distant metastasis. High risk features include advanced primary disease, regional nodal metastasis (N+) with or without extracapsular spread (ECS), and perineural invasion (PNI). Patients with these features are often reviewed by multidisciplinary teams and receive combined modality treatment involving surgery and adjuvant post-operative radiotherapy (PORT). The aim of this study was to analyse the prognostic factors of patients with N+ NMSC of the head and neck and the role of PORT in this high-risk patient group.

Method

We retrospectively reviewed patient notes who presented with NMSC of H&N with N+, managed surgically with or without adjuvant therapy over a 25-year period at our single- high volume centre. We specifically reviewed patient demographics, disease-free survival and histological features predictive of poor outcome.

Results

363 patients presented with NMSC of H&N over the review period. 26% had N+ with 60% having a previous history of NMSC. The histology of the primary site with N+ was squamous cell carcinoma in 84% of patients. 74% of patients with N+ were treated with surgical resection (selective neck dissection +/- parotidectomy) and PORT, with or without adjuvant systemic therapy. The remaining patients with N+ received palliative radiotherapy or best supportive care. Of those receiving therapeutic treatment, 16% remained disease free at 5 years, of whom 75% had presented with single node disease and had no high-risk histological features (ECS or PNI). 84% had recurrence within 5 years and 24% died within 2 years of treatment from disease recurrence or distant metastasis. All patients with recurrence had high-risk histological features on primary resection, and had multiple co-morbidities.

Conclusion

We present retrospective data from a tertiary centre, demonstrating prognostic factors that predict poor disease-free survival in patient with NMSC of H&N with N+, treated with surgical resection and PORT. Retrospective data supports the role of PORT in high-risk disease such as those with N+, but there is less clarity over other factors which should be considered- including patient specific factors such as age and co-morbidities. As a result of this uncertainty, the use of PORT in the treatment of NMSC is predominantly based on individual centres policies. Further prospective studies are warranted in this area.

Proposed Pilot of improving access to H&N cancer surgery for frail and over 65's at a high volume H&N surgical centre ; reducing health equalities

Poster

Ms. Denise Flynn [1], ***Mr. Imran Mannan*** [2], ***Mr. Daniel Sommer*** [2], ***Mr. Andy Murphy*** [3], ***Dr. Ruheena Mendes*** [1]

1. *University College London Hospital,* ***2.*** *UCLH,* ***3.*** *North Central London Cancer Alliance*

Aim

The Head & Neck Pre operative medicine Service (POMED service) will aim to reduce health inequality access to H&N elective surgical pathway at UCLH for frail and/or over 65s through collaboration with medical MDT clinic to optimise patients for major cancer surgery in a high volume surgical centre

Method

Audit of outcomes of patients undergoing surgery in 2023 at UCLH for all patients undergoing cancer resections - review LOS , delayed discharge , post op complications in the over 65 age group
Scoping business case for intervention of POMED Service

Results

1. Improve the optimisation of frail and/or over 65s increasing the number who are able be considered for complex surgery through the elective surgical pathway at UCLH in 2024. ·
2. Reduce the average treatment pathway time for frail and/or over 65s by decreasing the number of days between a decision to treat and first treatment on 62d pathway
3. · Reduce the average post operative length of stay reducing the risk of delirium and/or complications within frail and/or over 65s patients ·
4. Reduce the number of days between inter-trust referrals for medically complex elective surgical patients and the decision to treat by engaging with referring trusts and improving access to medical MDT ·
5. Improve the percentage of patients who are able to access post-operative radiotherapy within the recommended 6-weeks through HANPOC service post-operative care and where appropriate repatriate patients to referring trust quicker to start PORT

Conclusion

1. Increase in percentage of patients who are offered curative surgical treatment who have been diagnosed with a H&N cancer in NCL.
2. · Reduction in average 62d pathway for H&N patients having curative surgical treatment but are medically deconditioned·
3. Reduction in average number of days between decision to treat and first surgical treatment ·
4. Reduction in average post-operative length of stay for H&N patients at UCLH ·
5. Reduction in number of days between an ITR and decision to treat for H&N patients at UCLH from network referrals
6. Increase in number of patients who receive post-operative radiotherapy within 6-weeks
7. · Reduction in number of patient who are medically fit and delayed discharged ·
8. Trust, clinician and Patient feedback

Psychosocial Impact of Laryngectomy in the UK: Insights from Patient-Reported Outcomes and Validated Quality of Life Measures

Poster

Dr. Yuri Hirayama [1], ***Mrs. Megan Browning*** [1], ***Mr. Mantegh Sethi*** [1], ***Mr. Mriganka De*** [1]

1. *University Hospitals Birmingham*

Aim

Laryngeal squamous cell carcinoma (SCC) accounts for approximately one third of all head and neck cancers worldwide. Total laryngectomy remains the mainstay of treatment for T4a laryngeal SCC and is also a viable option for some T3 laryngeal and T2-T4 hypopharyngeal SCCs. However, it is associated with significant morbidity, including loss of voice, disruption of swallowing, coughing and respiratory issues, the combination of which has an irrevocable negative impact on a patient's health-related quality of life (HRQoL)[1–6]. The determinants of HRQoL in post-total laryngectomy patients has been previously reported globally, such as in the United States[7], Brazil[5], and the Netherlands[8], however is yet to be reported in the United Kingdom using validated measures. The objective of this study is to use a validated HRQoL questionnaire to examine psychosocial outcomes in patients undergoing total laryngectomy as a definitive treatment for laryngeal cancer in the West Midlands region of the United Kingdom.

Method

Prospectively collected database of all patients who had undergone total laryngectomy between May 2017 to October 2023 at a tertiary head and neck cancer unit (University Hospitals Birmingham, UK). All adult patients (aged >18 years) who underwent total laryngectomy for primary or salvage treatment of laryngeal cancer were included. Patients who were deceased or having end of life care were excluded. The World Health Organization Quality of Life (WHOQOL-BREF UK)[9] questionnaire was sent to included patients, with a cover letter and stamped return envelope. A text message summarising the study was also sent out to these patients. Participation was voluntary and return of the questionnaire was taken as implied consent to participate in the study. Data were collected and stored on a trust password-encrypted computer using Microsoft Excel. A mixed quantitative and qualitative approach was taken for data analysis.

Results

Thirty-six patients met inclusion criteria. Twenty (56%) questionnaires were returned. One patient was excluded from analysis due to inadequate completion of the questionnaire. The resulting nineteen participants consisted of 17 males and 2 females, aged 67 years (range 58 – 82 years). Almost all (n=18, 94.7%) had at least one co-morbidity. Only 2 patients (10.5%) had a pre-existing diagnosis of depression. The mean scores for the four domains of WHOQOL-BREF in our sample were as follows: Physical 55.0 (SD ±13.4), Psychological 57.7 (±14.5), Social 61.4 (±22.3), and Environment 52.5 (±17.1), with 0 representing the worst state of health and 100 representing the best state of health within the assessed domain. The health satisfaction score (61.8±26.8) was higher than the overall QoL score (34.2±25.3). Additionally, patients in our study reported experiencing frustration due to difficulties in communication, feeling unheard and misunderstood, along with fatigue-induced inactivity, leading to a sense of guilt.

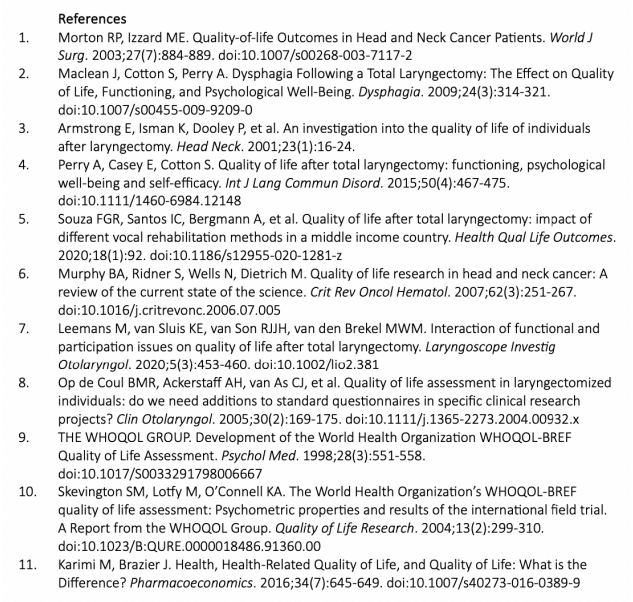
Conclusion

In our cohort of laryngectomised patients, HRQoL scores for physical, psychological, social, and environmental domains were all lower than baseline data from the UK population[10]. However, despite these poor HRQoL scores, patients reported relatively higher satisfaction with their health. This discrepancy may be attributed to

factors such as adaptation to illness, subjective perception, comparative perspective, psychological resilience, satisfaction with healthcare delivery, and the positive influence of strong social support. With the decline in mortality rates due to medical advancements, Health-Related Quality of Life (HRQoL) is a vital outcome measure, warranting consideration when formulating treatment strategies and guiding patient support[11].

Reference (if applicable)

Full reference in attached image



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Screenshot 2024-02-02 at 14.56.53.png

Quantifying muscle mass loss during radiotherapy and chemotherapy for human-papilloma virus related oropharyngeal carcinoma.

Poster

Dr. Helen Pearce [1], ***Mrs. Isobel Bowe*** [2], ***Mrs. Nola Lynch*** [2], ***Ms. Estelle Rickelton*** [2], ***Ms. Lillian Marcantonio*** [2], ***Mr. James O'Hara*** [1]

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Aim

Weight loss and muscle mass loss is well recognised following treatment for many types of cancer. Exercise is increasingly advocated for patients undergoing and recovering from cancer treatment. Our research team is designing an exercise intervention trial through radiotherapy and chemotherapy (CRT) for patients with human papilloma virus related oropharyngeal carcinoma (HPV+OPC). The H&N5000 data shows this group of patients suffer the highest rate of cancer related fatigue. Muscle mass loss has been quantified from cross sectional imaging for other cancer sites but has not been well explored in HPV+OPC. These patients don't often have the same cross sectional imaging pre and post-treatment. We aimed to measure muscle mass loss at three anatomical levels in patients with HPV+OPC, having undergone CRT and determine which level is most applicable for future clinical studies. We also aimed to measure weight loss in a larger HPV+OPC population at baseline and three months.

Method

Patients were identified from the prospectively collected Head and Neck Audit. Demographic data was collected for a total of 80 patients between November 2021 to January 2023 to include: age, gender, weight at diagnosis, weight at three months. A separate cohort of patients (n=18) between December 2022 to April 2023 were selected for analysis of skeletal muscle mass (SMM) based on PET-CT imaging. The axial slices of the CT component of the PET-CT scans were analysed. SMM was measured via cross sectional area by drawing around the inner and outer circumference of the muscles. This was performed at the third cervical (C3), 12th thoracic (T12) and third lumbar (L3) vertebrae levels. The results were analysed using descriptive data. The relationships between muscle mass at each level was depicted using scatter plots. The paired samples t-test was performed to assess for any changes in muscle mass pre and post-treatment.

Results

94% of participants experienced some form of weight loss during and after treatment. In the cohort of 18 patients, 10 were aged 55-64 years and, 17 were male. SMM loss data appeared approximately normally distributed at levels L3 and T12 but not at C3. The graphical data appeared positively related between L3 and T12 but less so between L3 and C3. The average percentage reduction in SMM between pre- and post-treatment PET-CT imaging was 8% at L3, 5% at T12 and 5% at C3. There was a statistically significant reduction in SMM at L3 (mean 1.64 cm^2 in cross sectional area - 95% CIs: 0.64, 2.63, p=0.003) and at T12 (mean 4.33 cm^2 – 95% CIs: 2.42,6.24, p<0.001. There was no statistically significant reduction in SMM at C3 (mean 2.57 cm^2: CIs: 0.22,5.37, p=0.069).

Conclusion

Patients undergoing CRT for HPV+OPC experience nearly 10% weight loss, on average, 3 months following treatment. This coincides with a reduction in overall quality of life measured in previous clinical trials. This weight loss is accompanied by a reduction in SMM of between 5-8%. Patients with HPV+OPC do not all undergo pre-

treatment PET-CT or abdominal CT scanning. Previous studies have measured SMM at L3 for other cancer sites. Measuring SMM at T12 appears a valid alternative in our patient population, as all will undergo thorax staging pre-treatment. Measuring at C3 may not be a useful level to measure SMM loss as it is typically affected by RT. Further research is required to explore interventions that reduce SMM loss through CRT and the effect this may have on quality of life and cancer related fatigue.

Radiotherapy fraction delivery time does not affect survival outcomes in patients with oropharynx cancer, unselected for chronotype

Poster

Dr. James Price [1], ***Prof. David Thomson*** [1], ***Prof. Catharine West*** [2]

1. *The Christie NHS Foundation Trust,* ***2.*** *The University of Manchester*

Aim

The rhythmic expression of *clock* genes generates circadian rhythms that affect cell cycle progression. As different stages of the cell cycle correlate with sensitivity to radiation, it has been postulated that radiotherapy treatment time can influence treatment outcomes. Prior studies, including randomised trials, suggest that earlier *vs* later radiotherapy times are associated with superior outcomes, but these are limited by dichotomisation of treatment times, small patient numbers and cohort heterogeneity.

In this study, we aimed to assess the relationship between radiotherapy time and outcomes for a large, contemporary cohort of oropharynx squamous cell carcinoma (OPSCC) treated at a tertiary cancer centre.

Method

A retrospective review of prospectively-collected data. Eligibility criteria: all cases of non-metastatic OPSCC treated with curative-intent (chemo)radiotherapy at The Christie between 2012 and 2019. Patient-, cancer- and treated-related information was extracted, including the time of day that each radiotherapy fraction was delivered. The average radiotherapy fraction delivery time per patient was calculated and considered as a continuous variable.

Relationships between average fraction delivery time and other variables were assessed. The primary endpoint of interest was overall survival (OS), with progression-free survival (PFS) a secondary endpoint. Kaplan-Meier plots were created to show estimated OS according to average fraction delivery time quartile. A multivariable Cox Proportional Hazards (PH) model was fitted, adjusting for relevant patient- and cancer-factors, along with average fraction delivery time, need for hospital transport (% of fractions), distance of patients' address from the treating centre and the Index of Multiple Deprivation (IMD) decile as a marker of socio-economic deprivation.

Results

32742 radiotherapy fractions were delivered for 1119 patients. Patient characteristics are shown in the Table.

On average, married patients were treated earlier than single/separated patients (average fraction delivery time 12.5 *vs* 13.37). Other patients with an earlier average radiotherapy time were those with superior performance status (PS 0-1 vs 2-3, 12.89 *vs* 13.71), less co-morbidity (ACE-27 score 0-1 vs 2-3, 13.03 *vs* 13.39) or p16-positive disease (p16-positive *vs* negative, 12.94 *vs* 13.77).

Figure 1 shows estimated OS according to mean radiotherapy time quartile (quartile 1 = earliest, quartile 4 = latest); mean radiotherapy time quartiles seem to stratify for OS.

On Cox PH regression, when adjusted for patient- (age, PS, ACE-27 score, smoking, IMD decile), cancer- (p16 status, tumour/nodal stage) and treatment- factors (radiotherapy fractionation, chemotherapy use) mean fraction delivery time was not prognostic for OS (HR 0.97; 95% CI 0.91-1.04; p=0.4) or PFS (HR 1.00; 95% CI 0.93-1.07; p>0.9).

Conclusion

When assessing mean fraction delivery time as a continuous variable and adjusting for relevant factors, mean fraction delivery time is not prognostic for patients with OPSCC treated with radical (chemo)radiotherapy. Observations of improved outcomes for patients treated earlier in the day (prior to adjusting for covariates) can

be explained by such patients typically being fitter, having less co-morbidity and being more likely to have p16-positive disease. There is no evidence that circadian rhythm affects survival outcomes in patients with OPSCC, unselected for chronotype.

Characteristic	N = 1,119[1]
Age (years)	59 (52, 66)
Gender	
Female	249 (22%)
Male	870 (78%)
Marital status	
Married	479 (58%)
Separated	101 (12%)
Single	244 (30%)
Unknown	295
ECOG performance status	
0	651 (59%)
1	334 (30%)
2	104 (9.4%)
3	23 (2.1%)
Unknown	7
ACE-27 co-morbidity index	
0	492 (44%)
1	351 (31%)
2	197 (18%)
3	75 (6.7%)
Unknown	4
Weight (kg)	76 (65, 89)
Unknown	6
Body mass index (kg/m^2^)	26.0 (22.7, 29.2)
Unknown	126
Smoking history	

Circ table.png

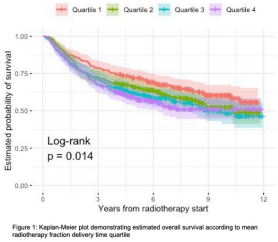

Figure 1: Kaplan-Meier plot demonstrating estimated overall survival according to mean radiotherapy fraction delivery time quartile

Circ fig1.jpg

Recognising victims of non-fatal strangulation victims in ENT clinic

Poster

Dr. Louise Le Blevec [1], ***Mr. James Moor*** [1]

1. *Leeds Teaching Hospitals NHS Trust*

Aim

Over 20,000 people are estimated to be victims of non-fatal strangulation (NFS) each year in the UK.[1] Furthermore, research suggests that the risk of homicide in NFS victims increases seven-fold, with strangulation/asphyxiation being the second most common method of killing in female homicide.[1,2] Victims of non-fatal strangulation can suffer from voice changes (dysphonia or aphonia) and subsequently present to ENT clinic.[3] Therefore, the aim of this case series is to create a profile for the victims of NFS in order to increase the recognition of these patients in ENT clinic; the principal goal looks to safeguard and signpost victims appropriately and ultimately prevent deaths.

Method

Victims of NFS were identified through safeguarding referrals, police requests for scoping victims and admission of NFS during ENT voice clinic appointments at a hospital trust. Data regarding the patient profile, the incident and the perpetrator profile was collected during a six-month period. The English Index of Multiple Deprivation (IMD) checker was used to produce an overall relative measure of deprivation in relation to the patient's postcode.[4] There were 20 victims identified: 16 presented to ED at the time of assault, 2 presented to ED with a different presentation but admitted to NFS and 2 were identified during ENT voice clinics.

Results

Of the 20 victims identified, 18 were female (90%) and 2 were male (10%). 90% of perpetrators were male and they were all intimate partners with the exception of one victim who did not disclose their relationship with the perpetrator. Ages of the victims ranged from 21 to 70 with a mean and median age of 40.5 and 38.5 respectively. 80% were white British. The IMD mean was 2.75 and mode 1 (1 being the most deprived decile, 10 the least deprived). 60% of victims had suffered assault from the same perpetrator, for which only 25% of them had previously presented to hospital for. 70% had a history of mental health disorder. 55% had a history of alcohol and/or drug abuse. Half of the victims described and/or had signs of other injuries to the head and neck and 65% had injuries to the rest of the body.

Conclusion

Although the cohort of patients was small, including a very small number admitting NFS in ENT clinic, a pattern for victims of NFS seems to emerge. A higher level of suspicion should be employed during ENT clinic appointments when patients fit this demographic and description. Further data collection is required to increase the accuracy and reliability of these profiles. Following this, education of ENT clinicians to suspect, recognise and manage victims of NFS will be required, including appropriate signposting and safeguarding referrals, in the hope to support the victims and prevent deaths.

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Recurrence rate of Oral Leukoplakia after surgical therapy and analysis of clinical factors affecting the recurrence: A Systematic review and Meta-analysis

Poster

Dr. Ashutosh Kumar Singh [1], ***Dr. Bishwa Bhattarai*** [2], ***Dr. Rajeeb Chaulagain*** [3], ***Dr. Tine M Soland*** [2], ***Dr. Bengt Hasseus*** [4], ***Dr. Dipak Sapkota*** [2], ***Mr. Rabin Singh*** [1]

1. *University Hospital Southampton,* ***2.*** *Oslo University,* ***3.*** *Tribhuvan University,* ***4.*** *University of Gothenburg*

Aim

The management of oral leukoplakia (OL) is challenging because of their high risk of recurrence and malignant transformation. Of note, recurrent OL are associated with a higher risk of malignant transformation than non-recurrent OL. This underscores the need to identify determinants important for OL recurrence. The present meta-analysis aimed to examine the the recurrence of OL after various surgical treatment used for the management of OL and effect of various clinicopathological factors on the recurrence rate.

Method

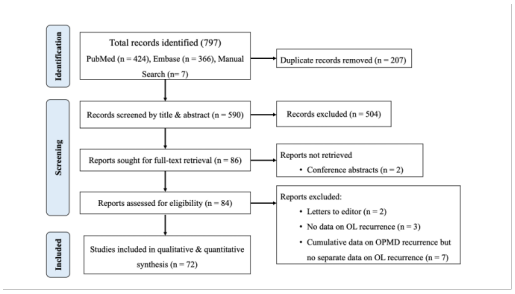
Electronic searches were conducted in PubMed and Embase to retrieve studies reporting OL recurrence after surgical excision. The pooled proportion of OL recurrence after surgical excision was estimated by random effect model. Subgroup analyses were conducted based on the surgical technique, data type (prospective or retrospective), grades of epithelial dysplasia, anatomical subsites, clinical type (homogenous or non-homogenous) and size of OL, surgical margin (positive or negative), and smoking habits. Meta-regressions were conducted to identify the association between age, sex, and follow- up duration on OL recurrence. A network meta-analysis was performed to determine the best surgical modality. A narrative synthesis was performed to summarize the characteristics of the included studies. Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies was used to assess the risk of bias in the studies. R-studio and OpenMetaAnalyst software were used for statistical analysis. Stata version 18.0 was used to acquire graphical results.

Results

Seventy-two studies with a total of 7222 samples were included in the meta-analysis. The surgical modalities included were laser-based techniques, conventional surgery, cryosurgery, and photodynamic therapy. A pooled proportion of recurrence of 22% was observed. Laser-based surgical methods resulted in fewer OL recurrences than other treatment modalities, and the combination of CO2 laser excision and vaporization was identified to be the best approach to prevent OL recurrence with 11% recurrence rate. OL in the retromolar area and multiple sites, non-homogeneous OL, advanced age, female sex, inadequate surgical margin, and retrospective data were significantly associated with higher OL recurrence independent of the surgical modality. Network meta analysis suggest that based on the risk of OL recurrence, the treatments could be ranked from the best to the worst as laser excision > laser vaporization > conventional surgery > cryotherapy > PDT.

Conclusion

The results of the present study revealed that laser-based surgeries reduce the recurrence rate of OL compared to surgical excision or cryotherapy. Female sex, advanced age, non- homogeneous OL, and OL with inadequate surgical margins have a greater propensity for recurrence. Therefore, OL patients with such clinicopathological features should be considered for a close follow-up regimen after surgical therapy. Since the contemporary evidence on determinants of OL recurrence is obtained primarily from single-arm studies, prospective studies and comparative trials are recommended for future.



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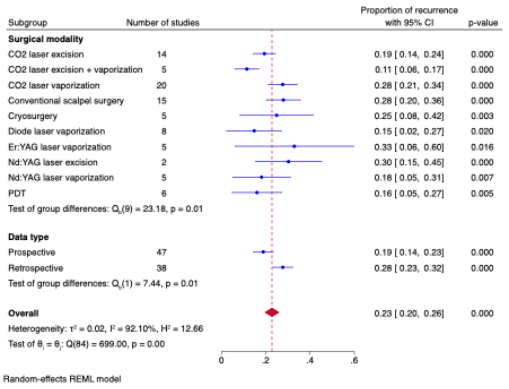
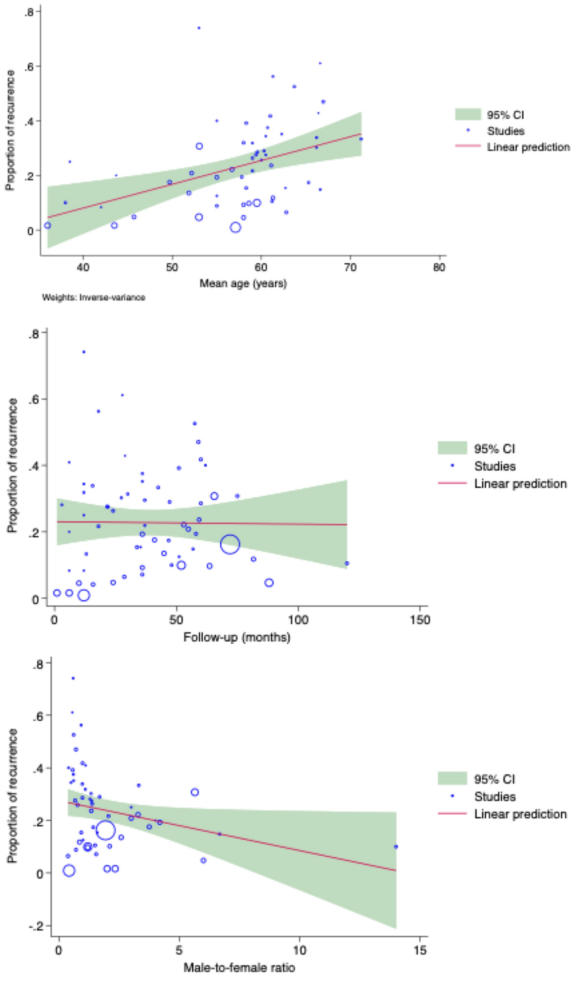


Meta analysis 1.png



Meta regression.jpg

Recurrent oropharyngeal cancer- functional status, patient priorities and patient experience at point of diagnosis.

Poster

Ms. Grainne Brady [1], ***Prof. Justin Roe*** [1], ***Prof. Vinidh Paleri*** [1], ***Prof. Pernilla Lagergren*** [2], ***Prof. Mary Wells*** [3]

1. *The Royal Marsden Hospital,* ***2.*** *Imperial College London,* ***3.*** *Imperial College Healthcare Trust*

Aim

Residual, recurrent and new primary oropharyngeal cancer (OPC) present some of the most challenging decision making in head and neck cancer (HNC) surgical, oncological and rehabilitative practice. Persistent toxicities from previous treatments, including long term and late swallowing dysfunction, coupled with the potential functional and quality of life (QoL) morbidity of further treatment(s) can influence decision making regarding curative and non-curative treatment options. As part of a larger longitudinal mixed methods study, we sought to investigate baseline functional and QoL status, patient priorities and patient and carer experience at the point of diagnosis of recurrent OPC.

Method

A prospective multi centre mixed method study was undertaken to investigate the functional and QoL outcomes, patient priorities and patient and carer experience of functional and QoL concerns and changes which occur over time in patients with recurrent OPC. Repeated assessments of patient-reported and clinician rated function and QoL measures included the MD Anderson Dysphagia Inventory (MDADI) (Chen et al 2001) and the University of Washington Quality of Life version 4 (UWQoLv4) (Rogers et al, 2010) questionnaires. Patient priorities were measured using the Chicago Priority Scale (CPS) (Sharp et al 1999). Concurrently, longitudinal qualitative in-depth interviews were undertaken to investigate patient and carer experience of function and QoL concerns and potential changes over time. Integration of quantitative and qualitative methods investigated convergence/ divergence/ expansion of findings at the point of diagnosis.

Results

Twenty five patients (20 males and 5 females) were included. Curative treatment was being considered in 56% (n=14) and non-curative in 44% (n=11). Median age was 62 (range 41-88). Twenty-four patients had previous radiotherapy. Median time since primary treatment was 15.5 months (range 4-240 months). Mean MDADI composite score at diagnosis was 65 (95% CI: 60 – 70). Mean overall UWQoLv4 QoL score was 44 (95% CI 35- 53) and three priority concerns included pain (56%, n=14), swallowing (48%, n=12) and mood (32%, n=8). ‘Being cured of my cancer’, ‘living as long as possible’ and ‘having no pain’ were the top 3 priorities as per CPS ratings (Figure 1). Interview data showed congruence with cure being the main priority regardless of treatment pathway (curative/ non-curative). Swallowing and QoL issues were highlighted as areas of concern following previous treatment and/or as a symptom of new disease reflecting MDADI and UWQoL data.

Conclusion

This mixed methods study has demonstrated that key priority for patients with recurrent OPC at point of diagnosis is to achieve cure and/or longevity in survival regardless of proposed treatment pathway (curative/non-curative). At baseline patients appear to be less concerned regarding function and QoL. This may relate to an already compromised level of function and QoL at point of diagnosis. This suggests that patients need to be fully counselled on the likely survival outcomes from the various treatment pathways as this is likely to be a key driver in patient centred decision making. Pain and mood were highlighted as key concerns which could be an area of focus for support at point of diagnosis. Further longitudinal data from this study will investigate

changes in function and QoL outcomes, concerns and priorities and how these may potentially change over time for this patient group.

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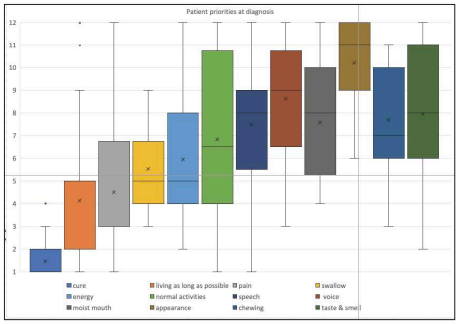

Figure 1: Patient Priorities

Bahno gb et al 2024 figure 1.jpg

Reduction of mandibular doses using non-coplanar VMAT radiotherapy in the adjuvant management of locally advanced oral cavity squamous cell cancers.

Poster

Mr. Joseph Simms [1], Mr. Nathan Wilson [2], Mr. Christian Corcoran [3], Dr. Rachel Brooker [1]

1. *The Clatterbridge Cancer Centre NHS Foundation Trust,* ***2.*** *University of Liverpool, School of Health Sciences, Therapeutic Radiography & Oncology,* ***3.*** *University of Liverpool, School of Health Sciences, Therapeutic Radiotherapy & Oncology*

Aim

Osteoradionecrosis (ORN) of the jaw is a devastating late complication of head and neck radiotherapy which can be difficult to manage and has a dramatic impact on patients' quality of life. Moon et al reported greater risk for those with oral cavity primary site who received (chemo)radiotherapy ((C)RT) in the adjuvant setting (1). Convention has been to avoid hotspot areas of >70Gy within mandible during RT treatment in order to limit the occurrence of ORN, and more recently, publication of normal tissue complication probability by Van Dijk et al (2) have provided a complication model relevant in the IMRT era. These constraints are, however, difficult to achieve when target areas lie in close proximity to, or even involving mandible, and have not yet been adopted into routine clinical practice.

This planning study aims to evaluate whether non-coplanar techniques will help to achieve these constraints.

Method

10 cases of ORN were identified from retrospective case note review of patients with OCSCC who received post operative (C)RT between Nov 2014-Nov 2017 at Clatterbridge Cancer Centre NHS Foundation Trust. Original plans were re-calculated using current dose calculation algorithms (Acuros18), and re-optimised using Eclipse v.18. Initial scoping of optimal planning technique was performed using five independent cases by comparing the original plan with five alternative solutions (table 1); including non-coplanar beam arrangements. The impact on optics doses between the two non-coplanar trajectories were also reviewed.

A non-coplanar solution with one full arc with couch at zero and two half arcs with the couch rotated 45 degrees for each was deemed the optimal technique (minimising mandibular dose whilst maintaining parotid sparing and avoiding excess dose to optics). All plans were re-optimised using this technique, attempting to improve mandibular V50Gy and D30% whilst noting changes in organs at risk dose.

Results

Re-optimising to constraints set out by Van Dijk et al (2) using both coplanar and non-coplanar techniques led to reduction in mandibular doses, as shown in table 1. Mean improvement in mandibular doses were most pronounced when examining Dmean and V50. As shown in table 2, applying our optimal solution led to a reduced mandibular V50, maintained parotid sparing and also improved PTV coverage. Although mean reduction in mandibular V50 was modest (5.6%), it was noted that three cases showed dramatic improvements in V50 with reductions of 13.6%, 12.3% and 23.3%. All three cases had centralised high dose PTV contours with floor of mouth/oral tongue primaries.

Conclusion

In this small comparative planning study, mandibular sparing can be achieved by using non-coplanar techniques. Of note, this was achieved without increasing parotid doses but did lead to marginal increases in dose to optic structures. This improvement, once confirmed in a larger comparative planning study, may confer to reduced frequency of ORN if examined in prospective randomised trial. Dosimetric benefit seems to be greatest in those with central floor of mouth or oral tongue primary cancers.

Reference (if applicable)

Van Dijk, Lisanne V. et al. Normal Tissue Complication Probability (NTCP) Prediction Model for Osteoradionecrosis of the Mandible in Patients With Head and Neck Cancer After Radiation Therapy: Large-Scale Observational Cohort. Int J Radiat Oncol Bio Phys. 2021. 111; 2: 549 – 558. DOI:*https://doi.org/10.1016/j.ijrobp.2021.04.042*

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Mean doses	Mandible V50 (%)	Mandible Mean (Gy)	Parotids Mean (Gy)	OpticNerve D 0.1cc (Gy)
Original Coplanar (weak objectives)	62.9 60.4	48.0 47.3	26.7 26.3	1.7 -
Coplanar (strong objectives)	54.7	44.5	29.5	-
Non-coplanar (weak objectives)	58.8	46.7	25.7	-
Non-coplanar (strong objectives)	53.0	43.8	26.6	6.2
Non-coplanar + 90 couch(strong objectives)	51.8	43.1	26.9	11.6

Table 1: Results of the scoping exercise, comparing the original plan with five different planning techniques for five patients

Table 1.png

Mean doses	Mandible V50 Gy (%)	Mandible D30% (Gy)	Mandible Dmean (Gy)	Parotids mean (Gy)	HD PTV D98%(%)	OpticNerve D0.1cc (Gy)
Original plan	37.9	49.7	36.5	20.5	94.6	3.2
Non-coplanar solution	32.3	48.1	32.4	19.0	96.2	5.5
Difference	-5.6*	-1.6*	-4.1*	-1.5	+1.6*	+2.3*

Table 2: Mean dose metrics across the 10 plans, comparing the original doses to those when re-optimised using the non-coplanar beam arrangement. *statistically significant (p<0.05)

Table 2.png

Retrospective analysis on the use of Biodegradable Temporising Matrix (BTM) in scalp reconstruction following skin malignancy excision.

Poster

Dr. Emma Turner [1], ***Mr. Tom Calderbank*** [1], ***Mr. Mohaned Mohamed*** [1], ***Mr. Dimitrios Kanakopoulos*** [1], ***Mrs. Noemi Kelemen*** [1]

1. *Hull and East Yorkshire Hospitals NHS Trust*

Aim

BTM is a synthetic biodegradable dermal matrix that aids the regeneration of new tissues by acting as a scaffold for angiogenesis and migration of fibroblasts to occur. It is used for reconstructive endeavours in skin defects where there is not a graftable bed, for example in cases where there is exposed bone or tendon. There is little evidence to encourage its use in scalp defects following skin malignancy excision. The retrospective analysis in this study aimed to evaluate the utility of BTM in this patient subset.

Method

A retrospective analysis of all patients undergoing BTM reconstruction for scalp defects following skin malignancy excision was performed over a 23-month period. Operative notes and clinical documents were used to examine the initial excision of malignancy, followed by BTM application. Patients were subsequently followed up and underwent a second stage reconstruction using a split thickness skin graft (STSG) application over the BTM. Inclusion criteria included a scalp defect where BTM was used for reconstruction. No patients were excluded from the study.

Results

12 cases were identified. Ages of patients ranged from 77 to 94 with a mean age of 84. In 8/12 cases the BTM was applied immediately post excision. In 4/12 cases the BTM was applied later, a mean time frame of 23 days following primary excision. 83% (10/12) patients went on to second stage resurfacing with STSG, the mean time of which was 49 days. The BTM failed in one case with bacterial colonisation noted. In the other case, the wound had fully healed, and further grafting was not clinically necessary. There was 100% take of STSG in the patients undergoing a second stage reconstruction.

Conclusion

This study demonstrates that BTM provides an alternative reconstructive avenue in patients with skin cancer of the scalp. It aids in STSG take, has a low complication profile and allows histology to be reviewed prior to definitive reconstruction.

Retrosternal goitre: predictors for sternotomy.

Poster

Mr. Soltan Islam [1], ***Dr. Adam Hatoum*** [1], ***Mr. Jagdeep Virk*** [1]

1. *Barts Health NHS Trust*

Aim

The presence of a retrosternal goitre is in itself an indication for surgical management.

We operate in a large East London NHS Trust, where hospital policy dictates all retrosternal goitres must be operated at sites with cardiothoracic surgical cover, in the case that a sternotomy is required intraopeartively.

Due significant pressure on theatre slots at these sites, patients are often left waiting months-years for their surgeries, unduly suffering the consequences of this.

We aim to analyse the data of all patients presenting to us with retrosternal goitres, who have successfully been operated, to assess if there may be predictive factors for those requiring sternotomy.

Allowing these operations at all hospital sites would significantly decrease the waiting times for these patients.

Method

Data was collated for all patients presenting to our ENT Head and Neck clinic with large retrosternal goitres.

The electronic health records were reviewed to determine which of those patients had been operated, at what site, and whether a sternotomy was required intraoperatively.

Other data such as pre-operative symptoms, pre-operative size, staging and cytology was also assessed.

Results

A total of 29 patients were found, of which 21 were operated.

All surgeries were successful, with no major post-operative complications.

None of these patients required intraoperative sternotomy, with the majority of goitres being removed via a trans-cervical approach.

The current literature surrounding this topic suggests that extension below the level of the aortic arch, extension below the tracheal bifurcation, and adherence to surrounding mediastinal structures may be

Conclusion

As evidenced by our retrospective review, none of our 21 patients required median sternotomies intra-operatively.

Interestingly, none of our patients met the pre-operative criteria described in the literature which would indicate the need for a median sternotomy.

Further assessment of patients with retrosternal goitres could aid the creation of guidelines for their surgical management.

This could relieve the significant theatre pressures faced by large tertiary centres, and ensure that patients are operated in a timely fashion, all whilst maintaining safety.

Risk stratification of suspected head and neck cancer referrals: is it safe?

Poster

Ms. Katharine Davies [1], ***Ms. Annabel Hill*** [1], ***Mr. Jeffrey Lancaster*** [1]

1. *Liverpool University Hospitals NHS Foundation Trust*

Aim

Remote triage of suspected head and neck cancer (HNC) referrals has been widely introduced since the Covid-19 pandemic. Previous studies have validated the use of telephone triage via a risk calculator; however, the safety of triaging from the referral letter alone is yet to be assessed. Our aim was to assess whether we could safely triage suspected head and neck cancer patients confidently using the GP letter alone.

Method

A prospective cohort study was carried out in a tertiary HNC centre in North Liverpool over a 16-week period. Patients were stratified to high or low risk from the GP referral proformas alone, using a validated risk calculator (HaNC-RC-v.2). Patients were followed up to record their cancer status. The outcomes of letter triage were compared to previously published outcomes of telephone triage.

Results

Data from 1500 referrals was analysed. 60% referrals were triaged as high risk, and 40% as low risk. 85 cancers were diagnosed, 45 of which were HNC. 96% of head and neck cancers were triaged as high risk. For all cancers, the sensitivity of cancers correctly triaged as high risk was 86% (92.5% telephone triage). The negative predictive value for a low-risk triage outcome, and no cancer diagnosis, was 98% for all cancer (99% telephone triage) and 99.7% for head and neck cancer.

Conclusion

Remote triage using GP referral letters alone, may be as effective as telephone triage, as well as much more time efficient. Triaging patients in this way, enables focused referrals to HNC consultants, with low-risk patients being seen by other ENT consultants or registrars. This facilitates prompt cancer diagnosis and reduces the risk of waiting time breaches, crucial in the post-pandemic era.

Reference (if applicable)

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Robotic Assisted Orbital Surgery for resection of advanced periocular tumours

Poster

Mr. Mohsan Malik [1], ***Ms. Claire Daniel*** [1], ***Mr. Jack Faulkner*** [2], ***Mr. Jimmy Uddin*** [1], ***Mr. Jean-Pierre Jeannon*** [3], ***Mr. Asit Arora*** [2]

1. *Moorfields Eye Hospital,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust,* ***3.*** *Guys and St Thomas NHS foundation trust*

Aim

Orbital surgery benefits from well-designed instrumentation that offers gentle tissue manipulation, high manoeuvrability and control. Nevertheless, in confined spaces, tissue manipulation must be accomplished with exceptionally high accuracy and precision. This is where robotic surgery offers an advantage. We aimed to evaluate a robotic-assisted surgical system's feasibility, safety and outcome in assisting tumour clearance.

Method

IDEAL-D framework was utilised. Pre-clinical (phase 0) cadaveric studies were performed to optimise positioning, setting and approach to anterior orbital resection using the DaVinci XI system (Intuitive Surgical, Inc.). We proceeded to first-in-human (phase 1), robotic-assisted anterior globe-spraying resection in a staged approach. Institutional ethics and multidisciplinary approval were sought in all cases.

Results

Four patients with advanced periocular tumours underwent robotic-assisted orbital surgery at a mean age of 63 years (range 42-86). One patient was found to have positive lymph nodes at the time of surgery and underwent simultaneous parotidectomy and lymph node clearance. Clear resection of the primary tumour was achieved in all patients; three patients underwent further resection due to narrow margins prior to reconstruction. Patients were follow-up for at least one year, and three remained disease-free. One patient with pre-existing extra-orbital disease developed metastatic disease five months post-op.
All patients preserved vision peri-operatively, with no unexpected adverse events.

Conclusion

Our series highlights the potential advantage of three-dimensional optics, multi-directional instrumentation and motion scaling technology to achieve globe-sparing tumour resection in advanced periocular tumours. However, further robotic instrumentation development is required for orbital surgery.

Routinely collected ePROMs detect differences in longitudinal health-related quality of life between patients with p16-positive and -negative head and neck cancer treated with radiotherapy

Poster

Dr. Isabella Fornacon-Wood [1], Dr. Thitikorn Nuamek [1], Prof. Corinne Faivre-Finn [1], Prof. Janelle Yorke [2], Dr. Kate Garcez [1], Dr. Chris Hughes [1], Dr. Lip Lee [1], Prof. David Thomson [1], Dr. James Price [1]

1. *The Christie NHS Foundation Trust,* ***2.*** *The Hong Kong Polytechnic University*

Aim

Oropharyngeal squamous cell carcinoma (OPSCC) associated with high-risk human papillomavirus (HPV) is associated with high rates of survival and generally affects otherwise-well patients of working age. On the contrary, non-HPV associated OPSCC, and other head and neck squamous cell carcinomas (HNSCCs) related to tobacco and alcohol exposure, are considered distinct disease entities and have a poorer prognosis.

Electronic patient-reported outcome measures (ePROMs) have emerged as an effective tool to capture patients' self-reported symptoms, treatment-related toxicities and health-related quality of life (HR-QoL). At The Christie NHS Foundation Trust, ePROMs have been embedded into the routine clinical care of patients with head and neck cancer since 2019.

This study aims to compare pre and post-treatment HR-QoL, as collected from ePROM questionnaires, for patients with HNSCC treated with curative intent radiotherapy, and compare outcomes for patients with p16-positive and p16-negative disease (as a surrogate marker for HPV).

Method

Patients with non-metastatic HNSCC treated with curative-intent radiotherapy between February 2019 and July 2022 were included.

Patients were invited to complete ePROM questionnaires as part of their routine care. In addition to symptom-related questions, questionnaires included the EuroQol EQ-5D-5L, assessing HR-QoL across five domains: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each domain is scored from 1 to 5 (1 – no problems, 5 – extreme problems).

ePROM questionnaires at baseline and 6 and 12-weeks post-radiotherapy were collected. Baseline demographic and clinical variables were collected from the electronic patient record. Patients were subdivided into p16-positive and p16-negative groups.

The mean of each HR-QoL domain was calculated and plotted with the standard deviation. Mixed ordinal regression models were fitted to evaluate how HR-QoL trends differed between groups using an interaction between p16 status and time (pre-radiotherapy, 6-week post-radiotherapy and 12-weeks post-radiotherapy), with the severity of each HR-QoL domain as the outcome.

Results

Data was available for 311 patients at baseline, and for 160 and 167 patients at 6- and 12-weeks post radiotherapy, respectively.

At baseline, 172 (55.3%) had p16-positive and 139 (44.7%) p16-negative disease (including 46 [33.1%] larynx, 37 [26.6%] oral cavity, 28 [20.1%] oropharynx and 26 [18.7%] hypopharynx). Patients with p16-negative vs -positive disease were older (median age 64 vs 61.5 years) with more current smokers (33.8% vs 9.9%) and a

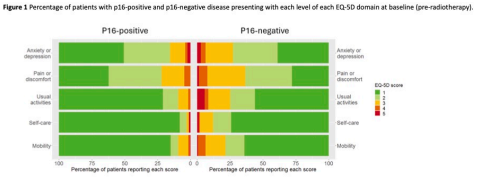
poorer performance status (PS) (PS 2-3: 16.5% vs 4.7%) .

Results from the mixed ordinal regression model suggest that at baseline, patients with p16-negative disease reported more severe HR-QoL scores across all domains (P<0.02, Fig1). The model suggests the trend of HR-QoL over time was similar between p16 groups for self-care and anxiety/depression; however, for mobility, usual activities and pain or discomfort, the trends were significantly different (Fig2), suggesting patients with p16-positive disease experience more severe changes in scores post-radiotherapy.

Conclusion

Patients with p16-negative HNSCC report more severe HR-QoL scores pre-radiotherapy than patients with p16-positive disease. However, post-radiotherapy, patients with p16-**positive** disease tend to report more severe changes in mobility, usual activities and pain or discomfort.

This work highlights the utility of routinely-collected ePROM data in detecting differences in HR-QoL for patients with HNSCC and the need for adequate support to improve not only HR-QoL for patients with p16-negative HNSCC at baseline, but also for patients with p16-positive disease post-radiotherapy.



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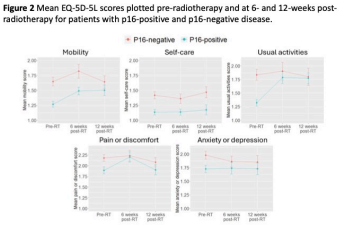

Fig2.jpg

Secondary tracheoesophageal puncture in a clinic setting

Poster

Ms. Amy Fitzgerald [1]

1. *The Newcastle Upon Tyne Hospitals NHS Foundation Trust*

Aim

Tracheoesophageal puncture (TEP) to insert a voice prosthesis after total laryngectomy is considered the optimal method of speech rehabilitation. This is usually performed under a general anaesthetic; though more recently this has been offered in a clinic setting using local anaesthetic. Literature reports of speech outcomes and complications with TEP varies. There is limited consensus regarding the use of assessments for selection of suitable patients, timing of TEP, follow-up practises and management of complications. This information is important when counselling patients prior to TEP.

Our study aim was to evaluate the timing of pre-procedure assessments, TEP, and Speech and Language Therapy (SLT) follow up. In addition, we aimed to identify early complications and long term outcomes.

Method

Retrospective notes review from a head and neck cancer centre in the north east of England. Study inclusion criteria were patients who underwent secondary TEP in clinic with Provox Vega puncture set (17fr 8mm, 10mm, or 12.5mm) and transnasal oesophoscope between April 2019 and April 2023. Patients with previous TEP were excluded.

Results

19 patients were identified (median age: 60 years), where successful TEP in clinic was achieved in 17 (89%). Six patients had total laryngectomy, twelve had pharyngolaryngectomy and one pharyngolaryngoesophagectomy. Taub test was conducted in 89% (n=17) prior to TEP. Median duration to Taub test was 5 months from surgery (range: 2-50mo). CT scan was performed within 3 months of TEP in 63% (n=12). TEP was conducted a median of 7 months post-treatment (range 0-55 months). Mean duration to first SLT review was 8 days, mean duration to first valve change was 39 days. Early minor complications occurred in 35% (n=6) due to infection at TEP site (hospitalisation with antibiotics: 2, outpatient antibiotics: 2). Thirteen patients used valve for primary communication at last review (2 died, 2 TEP closed due to later complications). The majority of patients used standard valves, one patient used an extended flange valve for peripheral leak.

Conclusion

Secondary TEP under local anaesthetic has been a successful insertion method in our centre for suitably assessed laryngectomy patients. The most common early complication was infection at the TEP. Evolution of our standard practice has led to routine CT scanning prior to TEP, as a small number of patients with leaking / non-healing TEP were found to have distant metastases. In addition, we now insert longer length 12.5mm initial voice prostheses, instead of 8 or 10mm, to reduce soft tissue pressure and infection risk.

Setting up a nurse-led diagnostic service for urgent suspected Head and Neck Cancer referrals.

Poster

Ms. Edie Byrne [1], ***Ms. Ying Ki Lee*** [2], ***Mr. Richard Oakley*** [1], ***Mr. Asit Arora*** [2], ***Mr. Jean-Pierre Jeannon*** [2], ***Mr. Aleix Rovira*** [2]

1. *Guys and St Thomas NHS foundation trust,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust*

Aim

The number of urgent suspected Head and Neck Cancer (HNC) referrals in the UK is increasing. As an alternative solution, Advanced Nurse Practitioners (ANP's) could be trained to perform the initial assessment of patients being referred from primary care via the '2 Week Wait' urgent referral. This project explored the feasibility of training a nurse practitioner to independently assess patients to identify 'red flag' symptoms and suspicious lesions on examination. This was done in a safe, quality assured training programme, with closely monitored outcomes. The three main outcomes of this project were to assess increased clinic capacity, to maintain patient safety and to assess patient satisfaction in comparison to the traditional model of diagnosis.

Method

The ANP had a consultant-led training programme and ongoing consultant supervision. A single-centre prospective cohort study of 490 patients was maintained via a patient database, which collected a range of information including; presenting complaint; outcome of appointment; date cancer ruled out or diagnosed and patient demographics. The ANP worked closely with the consultant team, engaging in ongoing discussions to reflect on decision making and ensure efficient diagnosis'. As this was a novel idea, patient feedback was collected to ensure a complete evaluation of the service. This included a patient focus group and a patient experience survey to measure satisfaction and confidence in the new model of care.

Results

Results show cancer conversion rate from referral to diagnosis of 5.1%, with no patients representing due to misdiagnosis when seen by the ANP. A total of 391 patient satisfaction questionnaires were assessed. These were shared with all patients after their initial appointments which ensured no bias. 55 questionnaires were returned by patients who had been seen by ANP. There were no statistical differences identified between any of the questions, and overall satisfaction of patients seen by ANP or Doctor were similar (p: 0.492). Ninety-eight percent of patients rated their overall experience 'very good' or 'good' when seen by the ANP.

Conclusion

Introducing a nurse-led model of care showed promising safety and outcomes for Head and Neck Cancer diagnosis. There was an evident increase to clinic capacity. There was no statistical difference between patient satisfaction when patients were seen by a Nurse on their initial assessment. The results demonstrate that a Nurse Practitioner can be an effective way to meet the demands of HNC diagnosis. Future developments would include expanding the nursing team and creating a nurse-led model of care for Head and Neck cancer diagnosis.

Speech and language therapists in 2WW head and neck clinics: can we be trained to support the capacity crisis?

Poster

Ms. Avisha Daryanani [1], ***Mr. Richard Oakley*** [1], ***Mr. Asit Arora*** [2], ***Mr. Jean-Pierre Jeannon*** [2], ***Ms. Claire Twinn*** [2], ***Ms. Natasha O'Neill*** [1], ***Mr. Aleix Rovira*** [2]

1. *Guy's and St Thomas' NHS foundation trust,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust*

Aim

Suspected head and neck cancer (HNC) referrals via the two-week-wait (2WW) pathway are rapidly increasing and challenging healthcare systems. Through completion of a robust training programme and competency framework, experienced Speech & Language Therapists (SLTs) with HNC background have the fundamental skills and knowledge to potentially offer a sustainable solution to addressing capacity issues and meet national faster diagnosis standards. With a low diagnostic yield of approximately 4% nationally, Consultants' time could be released to treat patients with a confirmed diagnosis requiring timely management. SLTs with specialist knowledge in assessment and management of dysphonia and dysphagia, which are common referral symptoms for suspected HNC, could add further value to the consultation by addressing these concerns if benign, appropriately signposting and thereby improving the patient experience. This project aims to present the training process required to adequately advance SLT skills to competently and safely run 2WW clinics for suspected HNC screening.

Method

A one-year pilot for SLT-led 2WW clinics running alongside Head & Neck Consultants has been implemented. The initial remit and model of service delivery, competencies and training guidelines were adopted from two experienced UK centres piloting low-risk dysphonia referrals. Observation of local 2WW clinics and discussions with Consultants highlighted varied referral symptoms and an admin-led triaging process. Consequently, the intended scope of practice was extended to meet local service needs considering processes, referral patterns, Consultant job plans and the SLT's skills and experience. Through an iterative process, target patient numbers and timescales to complete essential training for comprehensive HNC screening and management, including ordering of investigations were estimated, reviewed and regularly revised in accordance with the SLT's pace of skill development and confidence levels. Close clinical supervision and robust clinical governance procedures were completed to facilitate timely, safe introduction of independent parallel SLT-led clinics, with risk mitigation in place.

Results

Following Consultant agreement, service remit was extended to all suspected HNC excluding those with isolated otalgia, skin or oral lesions. Swallow screen was completed as indicated. A framework to demonstrate competence in oral examination, neck palpation, flexible nasendoscopy, identification of suspected cancer and benign laryngeal pathologies, was developed. HNC Consultants facilitated and supervised a systematic training approach encompassing clinical observation and skills training, joint assessment of minimum 15 patients, followed by distant supervision with review of clinical findings for minimum 25 patients and Consultant agreement with SLT assessment at 95% and above. An estimated 10-week training period was completed within 6 weeks with Consultant sign-off following SLT examination of 42 patients. There was acceptable agreement with assessment findings (96%), management plan (86%) and demonstration of SLT confidence, to commence independent practice with immediate access to Consultant support. Over 5 months, 207 patients across 53 SLT-led 2WW clinics have been seen.

Conclusion

SLTs with extensive HNC and scoping experience are well placed to safely and effectively lead 2WW HNC clinics as a measure to increase capacity needed for rising suspected HNC referrals and simultaneously offer targeted early advice for benign dysphonia and dysphagia symptoms. A structured, flexible and acceptable competency framework and training package has been developed demonstrating feasible completion within a short time frame through regular attendance in clinics with supervising Consultants facilitating training. Although easily replicable, competencies should be tailored to the individual needs in line with level of experience and skills. Commencement of independent clinical practice should also consider the clinician's confidence in completing the clinical assessments for purposes of HNC screening. Future possibilities for role expansion include formalisation of the role as Advanced Clinical Practitioner, implementation of SLT-led follow-up clinics on the HNC pathway and establishing mobile screening clinics in primary care or community settings.

Supraglottic Haemangiopericytoma: A Case Study and Review of the Literature

Poster

Mr. Amaan Jamal [1], ***Ms. Emma Watts*** [2], ***Mr. Jonathan Fussey*** [2], ***Dr. Adrian Warfield*** [2]

1. *University of Birmingham,* ***2.*** *University Hospitals Birmingham*

Aim

Haemangiopericytomas are rare soft tissue neoplasms, and presentation within the head and neck regions is even less common. We present a case of supraglottic haemangiopericytoma, and present a review of existing literature. We aim to review the pathophysiology, clinical presentation and management of supraglottic haemangiopericytomas. Recognising the relative rarity of this presentation, we aim to highlight the importance of specialist histopathological assessment and multi-disciplinary management.

Method

We reviewed the clinical presentation, diagnostic investigation and management of supraglottic haemangiopericytoma. A literature review identified published case reports of supraglottic haemangiopericytomas within the head and neck region. This data was synthesised and critically reviewed, focussing specifically on management strategies and rates of recurrence.

Results

We report a 56-year-old male who presented via two week wait referral with hoarseness, stridor and progressive dysphagia. The case was managed surgically with partial laryngectomy, with successful R0 resection and preservation of laryngeal function. A literature search yielded 10 results of existing reports of supraglottic haemangiopericytoma, with 20% experiencing recurrence during the follow-up timeframe.

Conclusion

This case highlights the importance of thorough and timely radiological and histopathological multidisciplinary input in order to aid diagnosis and management. Management strategies must maintain a balance between treatment and functional preservation. Further research is required to appreciate the duration and frequency of ongoing follow up, in addition to non-surgical treatment strategies.

Swallowing outcomes following dysphagia-optimised IMRT in head and neck cancer

Poster

Ms. Anne Weitzenkorn [1], Ms. Jane Dunton [2], Dr. Teresa Guerrero Urbano [2], Dr. Mary Lei [2], Dr. Miguel Reis Ferreira [1], Dr. Anthony Kong [1], Dr. Imran Petkar [2]

1. *Guy's and St Thomas' NHS Foundation Trust,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust*

Aim

Minimising radiotherapy (RT) dose to critical swallowing structures with dysphagia-optimised intensity-modulated RT (DO-IMRT) for head and neck cancer (HNC) patients treated with primary curative RT-based treatment has been shown to improve long-term patient-reported swallowing outcomes. Following the implementation of DO-IMRT as standard of care at our UK centre for HNC patients treated with primary (chemo)RT, we have previously reported that most patients returned to good swallow performance at six months post-DO-IMRT as assessed by Performance Status Scale for Head and Neck Cancer (PSS-HN). Here, we aim to evaluate longitudinal swallowing outcomes for up to 12 months post-treatment in a larger cohort of HNC patients treated with DO-IMRT.

Method

All patients received primary curative DO-IMRT: a radical RT dose of 65 Gy/30 fractions/6 weeks to the tumour and involved nodes and a prophylactic dose of 54 Gy/30 fractions/6 weeks to regions at risk of microscopic disease, with or without chemotherapy. PSS-HN, including normalcy of diet (NoD) and eating in public (EiP), was prospectively collected at baseline, end of treatment, six weeks, three months, six months and 12 months post-treatment. Eligible patients for this analysis had NoD scores available at baseline and six months post-treatment; patients with persistent disease and confirmed locoregional recurrence or other cause for dysphagia during the study period were excluded from analysis. PSS-HN results were dichotomised to indicate good (>50) vs moderate-severe (≤50) function. Descriptive statistics were used to present the results.

Results

109 patients received DO-IMRT from October 2021 to May 2023. 70 patients met the eligibility criteria and were included in the final cohort. Baseline patient and treatment characteristics are presented in Table 1. There was marked deterioration in diet texture from baseline to end of treatment with subsequent gradual improvement (Table 2, left side). At six months post-treatment, NoD scores (mean 81.1 [SD 24.2]; 83% >50) approached but remained lower than baseline (mean 93.4 [SD 16.2]; 90% >50). 42 patients had NoD scores at 12 months, with mean score (79.5 [SD 23.9]) similar to that at six months (81.1 [SD 23.9]). The EiP dataset was less complete, however mean scores at six - (88.5 [SD 22.6]) and 12 - months (88.2 [SD 25.2]) post treatment approached baseline score (93.0) (Table 2, right side). Mean NoD and EiP scores indicated good performance (>50) for all timepoints except end of treatment.

Conclusion

This larger mixed cohort of patients treated with DO-IMRT support our initial findings that most patients return to good swallow performance by six months post-treatment and appears to remain similar at 12 months.

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Table 1: Patient, disease and treatment characteristics

Characteristics	n (%)
Sex	
Male	57 (81)
Female	13 (19)
Age at diagnosis	
Range 29-79 years	
Median 62 years	
Tumour staging	
T1	5 (7)
T2	17 (24)
T3	20 (29)
T4	28 (40)
Nodal staging	
N0	24 (34)
N+	46 (66)
Primary site	
Nasopharynx	3 (4)
Oropharynx	48 (69)
- HPV+	9 (13 of total)
- HPV-	39 (56 of total)
Larynx	12 (17)
Hypopharynx	7 (10)
Treatment	
RT	19 (27)
CRT	44 (63)
Induction chemotherapy + CRT	7 (10)

Table 1 patient disease and treatment characteristics.png

Table 2: PSS-HN results over time

Timepoint	NoD N	NoD >50 (%)	Mean NoD Score (SD)	EiP N	EiP > 50 (%)	Mean EiP score (SD)
Baseline	70	63 (90)	93.4 (16.2)	58	53 (91)	93.0 (18.0)
End of Treatment	69	11 (16)	33.9 (28.0)	39	16 (41)	38.5 (34.8)
6 weeks	59	27 (46)	57.8 (33.7)	47	27 (57)	66.0 (37.0)
3 months	61	36 (59)	65.7 (29.6)	53	34 (64)	72.6 (34.1)
6 months	70	58 (83)	81.1 (24.2)	61	52 (85)	88.5 (22.6)
12 months	42	32 (76)	79.5 (23.9)	38	32 (84)	88.2 (25.2)

Table 2 pss-hn results over time.png

Swallowing outcomes post Trans-Oral Robotic Surgery (TORS) oropharyngectomy

Poster

Mrs. Sally Royle [1]

1. St George's NHS Trust

Aim

The overall project aim was to improve our service's knowledge of swallowing outcomes post TORS oropharyngectomy (OP), in order to provide more accurate information to patients who will be undergoing this surgery. Specific aims identified were:

•Determine typical trajectory of post-operative dysphagia in terms of severity and time-frames.

•Determine when and how short-term enteral feeding tubes are utilized in our service, and what impact this has on patients/outcomes.

•Identify potential predictive factors for increased risk of severe post-operative dysphagia.

Method

An initial literature review was carried out which identified:

•Conflicting evidence around swallow outcomes post TORS oropharyngectomy – generally indicates that swallowing recovers to near baseline in majority of patients but timelines variable.

•Minimal evidence specifically targeting short and long term swallow outcomes.

•Minimal evidence or implications on how to manage inpatient post-operative dysphagia in TORS OP.

An audit was then conducted on 23 patients who underwent TORS OP from February 2020 to September 2023. Subject demographics were as follows:

•Age range 47-76 (median = 62).

•18 Males, 5 Females.

•7 x T1, 14 x T2, 2 x T3.

•18 underwent adjuvant treatment (radiotherapy +/- chemo (C/RT)).

Data was collected on use of enteral feeding, commencement of oral intake, chest status and swallow outcomes over time. Descriptive analysis was carried out on the data gathered given the small sample size.

Results

Despite evidence of penetration/aspiration on initial swallow assessment with the majority of patients (70%), most were commenced on oral intake within 1 day of surgical approval (87%). 9% (N=2) of patients were treated for a chest infection during admission.

PSS Normalcy of Diet (NOD) scores were tracked over time. Most patients returned to their pre-morbid PSS NOD within 3-6 months (no C/RT) or 6-9 months (C/RT).

48% of patients had a Naso-Gastric Tube (NGT) inserted. Of those patients, 55% were discharged home with an NGT or a Radiologically Inserted Gastrostomy (RIG).

Average length of stay for those discharged with an NGT was 14.5 days, compared to 6.5 days for those discharged without an NGT.

All patients who were discharged with NGT or underwent RIG insertion were over 65 y/o.

Most patients who were discharged home with an NGT were undergoing C/RT. All patients who underwent RIG insertion were undergoing C/RT.

Conclusion

Conclusions

•The majority of TORS-OP patients are commenced on oral intake within one day of surgery, despite dysphagia, with low prevalence of chest infections as inpatients.

•The majority of TORS-OP patients returned to their pre-morbid swallow baseline within 3-6 months (no adjuvant treatment) or 6-9 months (adjuvant treatment).

•NGTs were inserted in approximately half of all TORS-OP patients for a wide variety of reasons, with 55% of these patients being discharged home with an NGT.

•NGT insertion more than doubled length of inpatient stay.

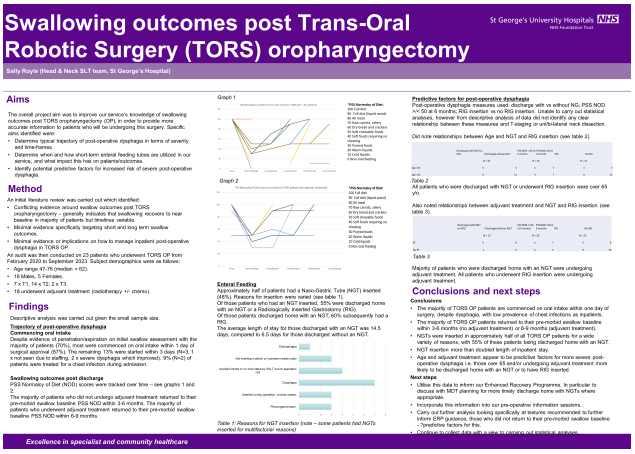
•Age and adjuvant treatment appear to be predictive factors for more severe post-operative dysphagia i.e. those over 65 and/or undergoing adjuvant treatment more likely to be discharged home with an NGT or to have RIG inserted.

Next steps

•Utilise this data to inform our Enhanced Recovery Programme.

•Incorporate this information into our pre-operative sessions.

•Continue to collect data with a view to carrying out statistical analyses.



Swallowing outcomes post trans-oral robotic surgery tors.png

Symptom trajectory following radiotherapy for head and neck cancer

Poster

Ms. Kate Hulse [1], ***Ms. Catriona Douglas*** [2], ***Dr. Claire Paterson*** [3], ***Prof. Roma Maguire*** [4], ***Prof. Anja Lowit*** [5]

1. *Department of Otolaryngology, University Hospital Monklands, NHS Lanarkshire,* ***2.*** *Department of Otolaryngology – Head and Neck Surgery, Glasgow Royal infirmary, Glasgow, UK,* ***3.*** *Beatson West of Scotland Cancer Centre, Glasgow, UK,* ***4.*** *Digital Health Department, University of Strathclyde,* ***5.*** *Speech and Language Therapy Department, University of Strathclyde*

Aim

Patients with head and neck cancer (HNC) undergoing radiotherapy experience acute toxicities occurring from around 1-2 weeks after starting treatment. A national audit of out-patient consultations found that patients presenting with new symptoms after treatment were significantly more likely to have a recurrence than asymptomatic patients. The presence of symptoms at the time of recurrence detection was found to be equally likely for all cancer subsites and period since treatment.

We performed a systematic literature review to analyse the trajectory of key symptoms following radiotherapy treatment for HNC and further define what is 'normal' morbidity and what may indicate recurrent cancer or other pathological processes.

Method

PubMed Central (MEDLINE) was searched from January 2010 - December 2023 for the key symptoms identified by the INTEGRATE audit group of difficulty breathing, tiredness, pain, difficulty speaking and dysphagia plus synonyms. Papers describing patients with HNC who underwent curative radiation therapy (+/- chemotherapy) and reporting measures relating to key symptom/s recorded at ≥2 time points after completion of radiotherapy were included.

Patients with thyroid, cutaneous, oesophageal cancer and lymphoma were excluded. As were patients receiving radiotherapy with palliative intent or treated prior to 2010 (i.e. before the wide-spread use of IMRT) or receiving a novel (chemo)radiotherapy, dosing regimen or other experimental treatment.

Results

57 papers describe the longitudinal pattern of key symptoms.

Any degree of increased dyspnoea from baseline is abnormal and is associated with worse over-all survival.

Patients have significant fatigue at 3-months and commonly up to a year post-treatment. Long-term fatigue is correlated with mental health and physical symptoms. At 1-year, patients with improved fatigue have better survival in the subsequent year than those with persistent fatigue.

80-90% of patients receive opioids during radiotherapy, the typical length of prescription is 3-26 weeks. Those with a moderate level of pain not subsiding at 3-months have significantly shorter disease-free survival.

Voice is impacted variably based on cancer subsite, but improvement may occur up to 2-years. Deterioration of speech is associated with reduced overall survival.

Pre-treatment dysphagia, surgery and dose of radiation to key structures are associated with long-term swallowing outcomes. Improvements are observed up to 12-months however most studies found residual dysphagia long-term.

Conclusion

Patients who receive radiotherapy for HNC should expect to have reducing pain up to 6 months, improvements in swallow function and levels of fatigue up to 12 months and less difficulty with their voice and communication up to 24 months. The trajectory of these symptoms is highly variable and dependent on other factors but if patients are experiencing excessive symptoms, it may indicate residual or recurrent disease and reduced overall survival. Increased shortness-of-breath at any time point during and after treatment is concerning.

Multiple studies report inferior functional outcomes in active or recent ex-smokers. Smokers should be informed about the greater burden of side-effects they are likely to experience, and we should ensure all patients are advised about cessation and offered support as early as possible. Patients who stop smoking prior to treatment also appear to have improved over-all survival.

Reference (if applicable)

INTEGRATE (The UK ENT Trainee Research Network). Post-Treatment Head and Neck Cancer Care: National Audit and Analysis of Current Practice in the United Kingdom. Clin Otolaryngol. 2021 Jan;46(1):284-294.

T4 Oral SCC: Margins at Guy's Hospital

Poster

Mr. Rory Durham [1], ***Ms. Radhika Dua*** [1], ***Ms. Sieuming Ng*** [1], ***Mr. Edwin Halliday*** [1], ***Mr. Mustansir Alibhai*** [1], ***Mr. Alastair Fry*** [1], ***Mr. Rafal Niziol*** [1]

1. *Guy's & St Thomas' Hospital*

Aim

Positive and close surgical margins in oral squamous cell carcinomas (OSCC) are critical factors influencing recurrence risk and overall survival, with T4 cancers exhibiting higher rates of positive margins. A recent study in the USA reported an 18.1% rate of positive margins in locally advanced oral cavity cancers (T3/4). This study aims to review the experience from a central London's oral & maxillofacial unit in managing these cases

Method

A retrospective review was conducted on T4 OSCC cases treated by Guy's Hospital oral and maxillofacial surgeons. Demographic information, tumour subsite, staging, treatment modalities, and margin outcomes were analysed.

Results

Preliminary findings from a 2-year period revealed that 55 patients with T4 OSCC underwent surgery. Of these, 8 patients (14.5%) exhibited positive margins, with 6 undergoing additional margin excisions. Close margins were observed in 11 patients (20%).

Conclusion

T4 tumours often involve anatomically complex areas, posing challenges for resection and raising concerns about the suitability of curative surgery. Despite these complexities, our department's experience demonstrates a proactive approach to managing positive margins. This analysis provides valuable insights into the outcomes of T4 OSCC surgeries, emphasising the importance of meticulous margin assessment and potential interventions to optimise patient outcomes.

Taste rehabilitation following (Chemo)Radiotherapy in Head and Neck Cancer: A Systematic Review

Poster

Mrs. Georgia Carlile [1], ***Ms. Freya Sparks*** [2]

1. *Barts Health NHS Trust,* ***2.*** *Barts Health NHS Trust / City, University of London*

Aim

Dysgeusia in the Head and Neck Cancer population following (chemo)radiotherapy is an issue acknowledged, but not widely addressed in literature.

Dysgeusia has a profound impact on oral intake during/post-treatment, impacting treatment outcomes (Zhang X et al 2020) and long-term swallow outcomes, weight and quality of life (QOL) (Hutcheson et al 2020, Barbon CEA et al 2022)

Studies report dysgeusia six-twelve months post-treatment, some reporting dysgeusia long-term or no return to baseline (Chen W et al 2022, Ruo Redda MG & Allis S 2006). It is reported as affecting 79-96% post-treatment. Lasting one-twelve months for 87% (Chen W et al, 2022), and ~25% long-term (L Gunn et al, 2021).

Dysgeusia impacts QOL post-treatment - eating and drinking enjoyment, social engagement, appetite, weight and 'patterns of intake' i.e. eating with family (Maria Grazia Ruo Redda & Siona Allis, 2006), with QOL scores improving as taste returns (Chen W et al, 2022).

Method

The review will be conducted in accordance with the Preferred Reporting Items for the International Systematic Reviews and Meta-Analysis (PRISMA) guideline and registered with Prospective Register of Systematic Reviews (Prospero).

Thirteen electronic healthcare databases were searched in January 2024, using 3 defined search terms:

Dysgeusia OR ageusia OR 'taste change' OR 'taste loss'

AND

rehab* OR 'taste rehab*' OR 'taste therapy'

AND

'Head and Neck cancer' OR 'head and neck neoplasm'

Records are being independently screened by two reviewers against inclusion/exclusion criteria.

Inclusion: Adults > 18 years, Male/female/nonbinary, Diagnosis of Head & Neck Cancer, (chemo)radiotherapy/radiotherapy, post-treatment dysgeusia, post-treatment intervention targeting dysgeusia.

Exclusion: Paediatrics < 18 years, dysgeusia from surgery only

Eligible studies will be assessed for quality using CASP and AMSTAR 2 critical appraisal tools and a data extraction tool will be established to record and document key data.

Results

An initial search of the above defined terms was carried out int January 2024, initially 24 titles were identified, however following deduplication this reduced to 22 titles.

A preliminary title and abstract screen were carried out and subsequently excluded 16 titles.

6 titles remain and will be progressed to full text screening.

Conclusion

Preliminary searches show a lack of evidence investigating taste rehabilitation in the Head and Neck Cancer population, despite a body of research documenting how widely it affects this population and the impact on

QOL as well as outcomes and function long term.
This suggests a gap in research, which would benefit from a scoping review of evidence exploring the mechanism of taste, the impact of dysgeusia on function and QOL, and how clinicians are approaching dysgeusia in wider clinical fields such as dysgeusia following Covid-19.
A systematic review of existing literature will provide important information to clinicians, highlight areas of research needs such as investigation into service user experience both via existing research and Patient and Public Involvement and Engagement (PPIE) which serve to guide understanding of ongoing impact and need in this area.
Together this will demonstrate gaps in information, influence intervention design and inform further research.

Reference (if applicable)

Barbon CEA, Peterson CB, Moreno AC, et al. Adhering to Eat and Exercise Status During Radiotherapy for Oropharyngeal Cancer for Prevention and Mitigation of Radiotherapy-Associated Dysphagia. *JAMA Otolaryngol Head Neck Surg*. 2022.
Chen WC et al. Long-Term Taste Impairment after Intensity-Modulated Radiotherapy to Treat Head-and-Neck Cancer: Correlations with Glossectomy and the Mean Radiation Dose to the Oral Cavity. Chem Senses. 2019.
Ruo Redda MG, Allis S. Radiotherapy-induced taste impairment. Cancer Treat Rev. 2006 Nov.
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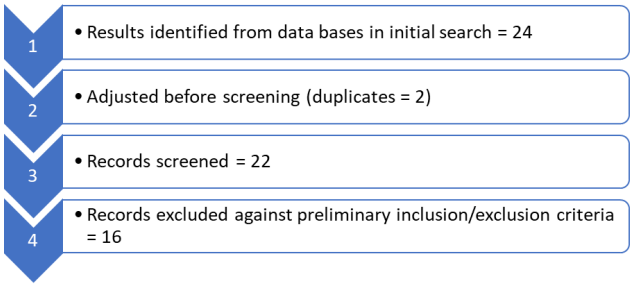
Zhang, X, Chen, X, Yang, J. et al. Effects of nutritional support on the clinical outcomes of well-nourished patients with cancer: a meta-analysis. *Eur J Clin Nutr* 74, (2020).



Results table.png

The Dosimetric Pattern of loco-regional Recurrence in Advanced Oral Cavity Cancer treated with Definitive (chemo)Radiotherapy: Deformable Image analysis and Real-world oncological outcomes

Poster

Dr. Kevin Chiu [1], ***Ms. Hannah Price*** [1], ***Ms. Priya Narga-Martin*** [1], ***Dr. Amit Gupta*** [1], ***Dr. Yat Tsang*** [2], ***Mr. Roeum Butt*** [1], ***Dr. Ashitha Ashraf*** [1], ***Mr. Daniel Megias*** [1], ***Ms. Andrea Fischer*** [1], ***Ms. Karen Venables*** [1]

1. *Mount Vernon Cancer Centre,* ***2.*** *Princess Margaret Hospital*

Aim

Advanced oral cavity squamous cell cancer (OSCC) is usually treated with primary surgery followed by post-operative radiotherapy. However not all patients are suitable to receive primary surgery and are instead recommended definitive radiotherapy, with or without concomitant chemotherapy. The aim of this study was to assess the oncological outcome of this relatively uncommon but important cohort of patients. The spatial and dosimetric pattern of loco-regional relapse from the definitive radiation treatment was analysed.

Method

OSCC patients treated with definitive intensity modulated radiotherapy (IMRT) between January 2018 – December 2021 were reviewed from a prospectively collected database. Patients were staged using 8th edition clinical (c)TNM classification. Suitable patients were considered for concomitant chemotherapy. All definitive IMRT planning had undergone departmental peer-review jointly with radiologists prior to treatment [1]. The 3-year local (LC), regional (RC), distant control (DC) and overall survival (OS) were analysed.

The diagnostic scans of recurrences, together with the contoured recurrent primary (rGTVp) and nodal gross disease (rGTVn), were co-registered with the IMRT-planning computed tomography (CT) using validated deformable registration and radiation dose calculation software. The sum of the delivered dose to the rGTV was calculated utilising the deformed weekly on-board radiotherapy CTs. The type of failure was then categorised according to the established dosimetric classification [2]: Type A (central high-dose), B (peripheral high-dose), C (central low-dose), and D (peripheral low dose).

Results

There were in total 41 patients: 32 (78%) had cT3-4 primaries, and 24 (59%) had cN2-3 neck disease (Table 1). At median follow-up of 36 months, the 3-year LC, RC, DC and OS was 55%, 68%, 69% and 41% respectively (Figure 1).

There were 16 cases (39%) of local and 11 (27%) regional relapse. Of the local relapse, 7 (44%) recurred within 3 months, 11 (69%) by 6 months; 4 (36%) regional relapse occurred within 3 months, and 9 (82%) by 6 months.

In total, 12 rGTVp and 10 rGTVn were suitable for analysis: 9 (75%) rGTVp were type A failure, 3 (25%) type B; 7 (70%) rGTVn were type A, 2 (20%) type B, and 1 (10%) type C. Volumetrically, there was a median of 15.2% (range: 2.1%-61.1%) less than planned high-dose (65Gy) delivered for type A, compared to 32% (range: 21.1%-38.1%) for type B failure (Table 2).

Conclusion

The departmental definitive IMRT regimen for OSCC did not necessarily demonstrate satisfactory loco-regional control. Majority of the treatment failure was type A, despite adequate delivery of high-dose 65Gy (in 30 fractions). This raises question if dose escalation (e.g. 70Gy in 33-35f) would provide better loco-regional control, if OSCC is to be treated definitively with IMRT without surgery.

The delivery of the radiation is also crucial. Factors that would affect precise target delivery, such as additional tongue swelling/movement inter-fraction, or changes in patients' neck contours during treatment, have to be identified and corrected closely. The treatment margins of IMRT may have to personalised to ensure optimal coverage.

Overall, careful patient and treatment selection, meticulous monitoring of treatment delivery are essential, if definitive IMRT is to be considered as a curative approach in OSCC.

Reference (if applicable)

[1] Chiu K, Hoskin P, Gupta A, Butt R, Terparia S, Codd L, Tsang Y, Bhudia J, Killen H, Kane C, Ghoshray S, Lemon C and Megias D 2021 The quantitative impact of joint peer review with a specialist radiologist in head and neck cancer radiotherapy planning *Br. J. Radiol.* 20211219

[2] Mohamed A S R, Rosenthal D I, Awan M J, Garden A S, Kocak-Uzel E, Belal A M, El-Gowily A G, Phan J, Beadle B M, Gunn G B and Fuller C D 2016 Methodology for analysis and reporting patterns of failure in the Era of IMRT: head and neck cancer applications. *Radiat. Oncol.* **11** 95

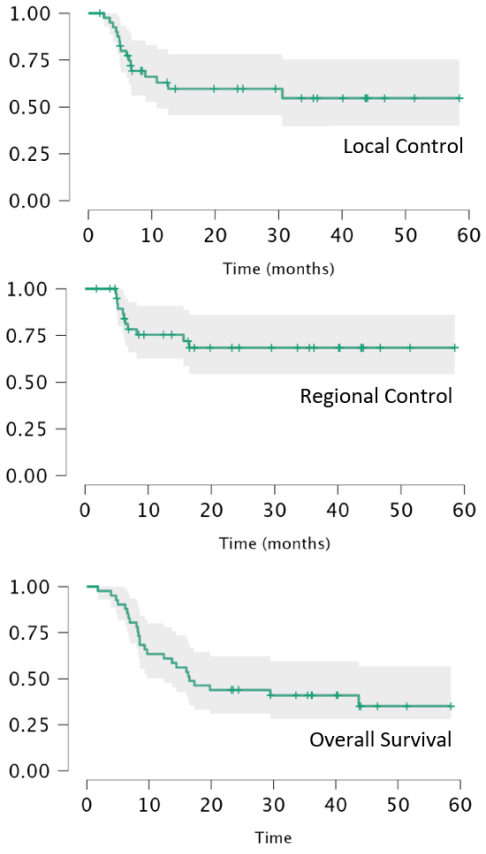


Figure 1: Kaplan Meir estimates of Local control, regional control and overall survival

Figure 1.png

	Number (%)
Median Age	65 (range 41-88)
Performance Status	
0 – 1	31 (76%)
2	10 (24%)
Clinical Stage	
I – II	3 (7%)
III	6 (15%)
IVa	23 (56%)
IVb	9 (22%)
Oral Cavity Subtype	
Tongue	23 (56%)
Buccal mucosa	7 (17%)
Floor of mouth	7 (17%)
Retromolar trigone	4 (10%)
Dose fractionation	
65Gy in 30f	34
55Gy in 20f	7
Chemotherapy	
Cisplatin	14 (34%)
Carboplatin	1 (2%)
None	26 (63%)

Table 1: The patient demographics and disease subtypes

Table 1.png

	Type A (Central High dose) Failure	**Type B (Peripheral High Dose) Failure**
Total	n = 16	n = 5
Planned volume receiving 95% High dose 65Gy (median)	100% (range 99.3 – 100%)	87.2% (range 80.7 – 97.4%)
Proportion of 95% high dose delivered (median)	100% (range 99.3 – 100%)	77.6% (range 71.3 – 94.8%)
Difference	**0%**	**– 5.4%**
Planned volume receiving 100% high dose 65Gy (median)	58.8% (range 23.9 – 96.6%)	50.0% (range 38.9 – 58.2%)
Proportion of 100% high dose delivered (median)	42.0% (range 0.25 – 95.9%)	19.5% (range 6.9 – 28.9%)
Difference	**–15.2%**	**–32.0%**

Table 2: The differences between the planned and delivered dose.

Table 2.png

The early occlusal contact – an unusual presentation of multiple myeloma.

Poster

Dr. Imran Aziz [1], ***Mr. Andy Burns*** [1]

1. *Sunderland Royal Hospital*

Aim

Multiple myeloma is a rare systemic malignancy of plasma cells, with around 6000 new cases diagnosed in the UK each year.

Literature review indicates variability in initial clinical presentation of multiple myeloma; with anaemia, hypercalcaemia, and bony pain being the chief presenting symptoms. The incidence of diagnosis from initial dental/orofacial abnormality is currently unknown. Whilst rare, oral presentations of multiple myeloma do occur and should be referred and investigated appropriately.

Here, we illustrate a first presentation of multiple myeloma via routine referral from a general dental practitioner to a TMJD clinic at our OMFS unit.

Method

Case report:

A 65 year old male presenting to a routine TMJD clinic, with a 6 month history of right sided TMJ pain, with progressive malocclusion. His chief complaint is of a right sided early occlusal contact and left lateral open bite. There is no history of trauma or medical history of note.

The only remarkable finding at assessment being the absence of the right condyle on orthopantomographic imaging. CBCT imaging indicated a lytic lesion in the right condyle prompting further CT staging which highlighted multiple lytic lesions throughout the skeleton with predominance for the spine, skull and ribs.

Results

The following results are noted:

- Multiple lytic lesions throughout the skeleton.
- 2 x IgA Lambda PP's 8 g/L and 4 g/L, kappa/Lambda ratio 0.16 at baseline.
- No prognostic cytogenetic abnormality identified – standard risk disease.
- Bone marrow biopsy identifying small clonal B cell population with null phenotype on flow but too small to be characterised on trephine by IHC.

This patient has since been referred to the local haematology MDT has been accepted to the RADAR clinical trial and commenced treatment for multiple myeloma.

Conclusion

There is significant variability in presentation of patients with multiple myeloma. Atypical orofacial presentations such as this pose a diagnostic challenge to dental and other healthcare professionals, leading to possible delays in diagnosis and treatment.

This case highlights the importance of appropriate referral and diagnostic work-up of patients with systemic malignancy.

It is imperative for clinicians to continue to report on any atypical presentations of systemic malignancy, such as that in this case presentation.

The effect of Diabetes Mellitus (DM) and pre-DM on complications following head and neck cancer (HNCA) surgery. Single centre audit.

Poster

Dr. Bilaal Mirza [1], ***Ms. Clare Schilling*** [1], ***Dr. Sejal Bhundia*** [1], ***Ms. Ursula Mackie-Savage*** [1], ***Dr. Aaron Cronin*** [1]

1. *University College London Hospital*

Aim

Individuals with DM face an increased risk of surgical complications. National guidelines have been set regarding peri-operative management of DM in HNCA surgical patients.

Audit of compliance with UK National Multidisciplinary Guidelines (patients with a pre-operative HbA1C > 69mmol/mol should be reviewed by a diabetes specialist prior to surgery; patients should maintain peri-operative blood glucose levels between 4-12mmol/l).

To determine the rates of surgical complications in DM and pre-DM HNCA patients undergoing surgery at UCLH.

Method

Retrospective analysis of patients that underwent HNCA surgery with curative intent at UCLH between April and October 2023. Data was retrieved from the UCLH QOMS database and electronic patient records.

Patient demographics, post-operative length of stay, and surgical complications were compared between HNCA patients without DM, and those with DM or pre-DM (HbA1C 42-47mmol/l).

Results

Of the 73 eligible patients that underwent surgery during the study period; 19 patients (26%) were DM or pre-DM patients. DM and pre-DM patients were older (70.2 ± 10.9 vs 61.7 ± 15.3) than non-DM patients, and also experienced higher rates of post-operative surgical complications (68.4% vs 37.0%, P<0.05).

80% of DM patients that developed surgical complications did not maintain their blood glucose levels within the acceptable range.

2 patients had a pre-operative HbA1C > 69mmol/l. Neither were seen by a diabetes specialist pre-operatively, nor maintained their peri-operative blood glucose within the acceptable range. Both suffered surgical complications.

Conclusion

An improvement in peri-operative DM control in line with national guidelines may reduce the levels of post-operative complications seen in this cohort.

	Non-DM Patients	DM Patients	Pre-DM Patients	Pre-DM and DM Patients
Total Patients	**54**	**15**	**4**	**19**
Advised to see DM specialist pre-operatively	N/A	2	N/A	2
DM specialist seen pre-operatively	N/A	0	N/A	0
Mean average age	61.7	71.3	66	70.2
Mean average length of stay	12.2	16.3	5.75	14.1
Surgical complications developed within 30 days	20	10	3	13
Wound dehiscence (recipient site)	4	8	1	9
Surgical site infection	10	3	0	3
Haemorrhage, haematoma, seroma	3	2	2	4
Post-operative fistula	0	2	0	2
Other unspecified surgical complication	7	1	1	2
Donor site complications (dehiscence, necrosis, infection)	2	3	0	3
Complication related to neck dissection / tracheostomy	3	1	0	1

Diabetes audit results.png

The functional outcomes of patients with incurable head and neck cancer treated with hypofractionated radiotherapy.

Poster

Mrs. Isobel Bowe [1], ***Mrs. Kathryn Scollen*** [2], ***Mrs. Nola Lynch*** [1], ***Ms. Diane Sellstrom*** [2]

1. *Nutrition and Dietetics Department, Newcastle Upon Tyne NHS Trust,* ***2.*** *Department of Speech, voice and swallowing, Newcastle upon Tyne NHS Trust*

Aim

It is widely accepted that palliative radiotherapy (RT) regimens provide benefits for patients with incurable head and neck cancer (HNC) with regards to disease control and survival. However, little is known about the swallowing and nutritional outcomes of this population, or the services required to support them.

In a systematic review by Desideri et al (2021) only 9 of the 33 studies included reported swallowing outcomes at baseline and another systematic review by Iqbal et al (2018) concluded that further studies were required to evaluate quality of life and the severity and duration of side effects.

The aim of this case series was to evaluate swallowing and nutritional outcomes using standardised and validated tools across multiple time points in order to inform service delivery and information given to patients.

Method

Patients planned to have palliative RT (25Gy 5#) were recruited consecutively via the HNC multi‐disciplinary team (MDT) meeting between December 2022 and August 2023.

Exclusion criteria included: recurrent HNC, previous HNC treatment, additional palliative treatments, patients who did not start treatment and patients with ear or skin cancer.

Swallowing and nutritional outcomes were collected as part of routine care at RT/MDT clinics at baseline and post-RT at 2 weeks, 1-3 months, 4-6 months and more than 7 months. Diagnosis and patient demographics were collected.

Swallowing outcomes tools included: Performance Status Scale Normalcy of Diet (PSS NOD), 100mlWater Swallow Test (WST) and Functional Oral Intake Scale (FOIS). Nutritional outcomes included weight, percentage weight change, Body Mass Index (BMI), percentage of intake from diet, Oral Nutritional Supplements (ONS) and/or enteral feeding.

Results

17 patients were included in the sample. Age ranged between 48-90yrs; 13 males and 4 females.

See results table attached.

A deterioration in PSS NOD score occurred in 47% of patients between baseline and 2 weeks post RT. 93% and 90% of patients had a stable or improved score at 3m and 6m post-RT respectively. 1 patient had a FOIS score of 1 (no oral intake) at all data points. An additional 2 patients scored 1, 2 weeks post-RT.

50% of patients were meeting their full nutritional requirements orally at baseline. 4 patients required enteral feeding. 75% of patients lost up to 10% weight between baseline and 2 weeks post‐RT. 75% of patients maintained or regained weight by 3m post-RT

Conclusion

This case series provides further evidence to support the use of hypofractionated RT in the management of patients with incurable HNC. There was a temporary reduction in swallow function indicated by poorer PSS NOD, increased aspiration rates and weight loss in the acute post-treatment phase, however outcomes were subsequently improved or maintained for several months post-treatment for many patients. There was a low

requirement for enteral feeding in this case series. These findings have helped to inform service delivery/direct support from speech and language therapy and dietetic services.
We aim to report outcomes between 6- 12months post treatment and data from patient reported outcome measures (EORTC H&N-35) when we have sufficient data.

Reference (if applicable)

Desideri et al (2021) Palliative radiotherapy in older adults with head and neck squamous cell carcinoma: A systematic review. Oral Oncology 119 (2021) 105355
Iqbal et al (2018) Palliative radiotherapy for locally advanced non-metastatic head and neck cancer: A systematic review. Radiotherapy and Oncology 126 (2018) 558–567

	Baseline	2wk-post RT	3m post RT	6m post-RT
PSS NOD score 100 (normal diet)	53%	24%	43%	40%
Aspiration on WST	29%	60%	23%	33%
ONS	39%	69%	30%	-

Bahno results table.png

The implementation of an embedded psychology service within a multi-disciplinary community head and neck cancer team: a clinical audit of referred patients and preliminary service evaluation.

Poster

Dr. Darren Reynolds [1]

1. *Guy's & St Thomas' NHS Foundation Trust*

Aim

The Community Head and Neck Team (CHANT) is an award winning multi-disciplinary team working across the six boroughs of South East London. The team, founded in 2009, is provided in the community by Guy's and St. Thomas' NHS Foundation Trust (GSTT). Patients are referred post-treatment for the rehabilitation phase of their cancer pathway in order to provide ongoing specialist rehabilitation closer to home. In 2022 the CHANT service was expanded to include a dedicated psychology service. An audit of all psychology referrals to date was undertaken to understand the clinical profile of referred patients, and in addition a preliminary service evaluation was carried out to explore patient experiences of their psychological input and to further inform future development of the CHANT psychology service.

Method

A retrospective audit of head and neck cancer patients who were referred to the CHANT Psychology Service between September 2022 and January 2024 was carried out. The service evaluation consisted of a mixed methods design including a quantitative analysis of routine clinical outcomes completed by patients after initial assessment and at point of discharge from the service, and a secondary quantitative and qualitative analysis of service user feedback collected from patients who had completed individual therapy.

Routine clinical outcome measures which were analysed included the Patient Health Questionnaire-9 (PHQ-9) to measure symptoms of low mood, the Generalised Anxiety Disorder-7 (GAD-7) to measure symptoms of anxiety, the Functional Assessment of Cancer Therapy – Head & Neck Version 4 (FACT-H&N) to measure health related-quality of life, the Perceived Stress Scale (PSS-10) to measure perceived stress, and the Acceptance and Action Questionnaire-II (AAQ-II) to measure psychological inflexibility.

Results

Between September 2022 and January 2024 a total of 155 referrals were made to the CHANT psychology service. Demographic and clinical characteristics of referrals is shown in Table 1. The majority of referrals were male (n=88; 56.8%), with 66 female referrals (43.2%). The age range of referred patients was 18–90 years old (M=59.69, SD=12.71). Primary reason for referral to the service included adjustment to symptoms, diagnosis or treatment side-effects (n=62; 40.0%), anxiety regarding health (n=34; 21.9%), end of life support (n=6; 3.9%), eating difficulties (n=2; 1.3%), low mood (n=46; 29.7%) and trauma (n=1; 0.6%).

Comparisons between mean scores on clinical outcome measures collected at assessment and at discharge (Table 2) highlighted patients had statistically significant reductions in symptoms of low mood and anxiety, improved quality of life, and higher psychological flexibility upon finishing therapy. Feedback form responses were extremely positive (Table 3) suggesting patients found their psychological input helpful overall.

Conclusion

Head and neck cancer is a challenging diagnosis. Even after successful treatment, patients can face ongoing

psychological difficulties which significantly impact on their health-related quality of life. To our knowledge, the CHANT psychology service is the only dedicated community head and neck cancer psychology service within the UK and both the current audit and service evaluation confirm that there is a strong need for such a service to be embedded within the existing CHANT team.

Current feedback from patients suggests that the CHANT psychology service is acceptable in terms of its current service delivery. Outcome measure data and patient feedback provide evidence that the introduction of this service has had a beneficial impact on the psychological well-being of referred patients. It is hoped that additional outcome measure data and patient feedback can be collected to further evaluate the efficacy of the service and to shape future service development and recommendations.

Table 1 – Demographic and clinical characteristics of psychology referrals.

Variable	n (%)
Gender:	
Male	88 (56.8%)
Female	67 (43.2%)
Age:	*M* = 59.69
	SD = 12.71
Ethnicity:	
White - English, Welsh, Scottish, Northern Irish or British	109 (70.3%)
White - Irish	4 (2.6%)
White - Any other White background	26 (16.8%)
Asian or Asian British - Chinese	1 (0.6%)
Asian or Asian British - Indian	2 (1.3%)
Asian or Asian British - Pakistani	2 (1.3%)
Asian or Asian British - Any other Asian background	1 (0.6%)
Black, Black British, Caribbean or African - African	3 (1.9%)
Black, Black British, Caribbean or African - Caribbean	1 (0.6%)
Black, Black British, Caribbean or African - Any other Black, Black British, or Caribbean background	2 (1.3%)
Mixed or multiple ethnic groups - Any other Mixed or multiple ethnic background	3 (1.9%)
Other ethnic group - Any other ethnic group	1 (0.6%)
Primary reason for CHANT Psychology Service referral:	
Adjustment to symptoms, diagnosis or treatment side-effects	62 (40.0%)
Anxiety regarding health (including fear of recurrence)	34 (21.9%)
End of life support	6 (3.9%)
Eating/feeding difficulties	2 (1.3%)
Low mood	46 (29.7%)
Trauma	1 (0.6%)
ICD-10 Diagnosis:	
C00 - Malignant neoplasm of lip	1 (0.6%)
C01 - Malignant neoplasm of base of tongue	17 (11%)
C02 - Malignant neoplasm of other and unspecified parts of tongue	14 (9%)
C03 - Malignant neoplasm of gum	6 (3.9%)
C04 - Malignant neoplasm of floor of mouth	7 (4.5%)
C05 - Malignant neoplasm of palate	1 (0.6%)
C06 - Malignant neoplasm of other and unspecified parts of mouth	3 (1.9%)
C07 - Malignant neoplasm of parotid gland	6 (3.9%)
C08 - Malignant neoplasm of other and unsp major salivary glands	2 (1.3%)
C09 - Malignant neoplasm of tonsil	31 (20.0%)
C10 - Malignant neoplasm of oropharynx	11 (7.1%)
C11 - Malignant neoplasm of nasopharynx	3 (1.9%)
C12 - Malignant neoplasm of pyriform sinus	7 (4.3%)
C13 - Malignant neoplasm of hypopharynx	2 (1.3%)
C30 - Malignant neoplasm of nasal cavity and middle ear	3 (1.9%)
C31 - Malignant neoplasm of accessory sinuses	3 (1.9%)
C32 - Malignant neoplasm of larynx	21 (13.5%)
C44 - Other and unspecified malignant neoplasm of skin†	2 (1.3%)
C56 - Malignant neoplasm of ovary†	1 (0.6%)
C69 - Malignant neoplasm of eye and adnexa†	1 (0.6%)
C73 - Malignant neoplasm of thyroid gland†	7 (4.3%)
C77 - Secondary and unspecified malignant neoplasm of lymph nodes†	2 (1.3%)
D16 - Benign neoplasm of bone and articular cartilage†	4 (2.6%)

† *patients with benign disease, who have the same symptoms or need the same treatments as head and neck cancer, are eligible for the service*

Table 1.png

Table 2 – Summary of mean outcome measure scores pre and post therapy.

Outcome Measures and Subscales	Pre-Therapy Scores *M (SD)*	Post-Therapy Scores *M (SD)*	*t*-test Analysis *t* (df)	
Patient Health Questionnaire - 9 Item (PHQ-9)	8.31 (5.36)	5.00 (4.85)	4.98 (12)	***
Generalised Anxiety Disorder - 7 Item (GAD-7)	8.23 (4.32)	4.08 (3.95)	4.21 (12)	**
Functional Assessment of Cancer Therapy – Head & Neck (FACT-H&N Version 4)†				
Physical Well-being Subscale	19.08 (5.07)	22.69 (3.84)	-3.47 (12)	**
Social/Family Well-being Subscale	14.62 (6.21)	15.54 (7.06)	-1.06 (12)	
Emotional Well-being Subscale	15.62 (6.21)	17.69 (4.68)	-2.78 (12)	*
Functional Well-being Subscale	10.62 (3.50)	16.92 (6.75)	-4.81 (12)	***
Head & Neck Cancer Subscale	18.15 (7.09)	24.38 (8.69)	-4.28 (12)	**
FACT-H&N TOI	48.54 (9.64)	64.00 (15.41)	-5.21 (12)	***
FACT-G Total	60.00 (13.90)	72.85 (17.00)	-4.86 (12)	***
FACT-HN Total	78.77 (16.68)	97.23 (22.92)	-5.07 (12)	***
Perceived Stress Scale – 10 Item (PSS-10)	20.69 (7.10)	18.08 (8.14)	1.79 (12)	
Acceptance & Action Questionnaire-II (AAQ-II)*	24.31 (9.12)	17.92 (7.79)	6.81 (12)	***

** p < 0.05, ** p < 0.01, *** p < 0.001*

† *Note: higher scores on FACT-HN and subscales is indicative of better quality of life.*

* *Note: lower scores on AAQ-II is indicative of greater psychological flexibility.*

Table 2.png

Table 3 – Summary of patient feedback regarding CHANT Psychology Service.

Total (n = 15)	*Yes, definitely*	Yes, to an extent	No	N/A or Don't Know
Do you feel you benefitted from seeing the Clinical Psychologist during your rehab?	12 (80%)	3 (20%)	0 (0%)	0 (0%)
Did you set goals or targets with the Clinical Psychologist during your rehab?	9 (60%)	6 (40%)	0 (0%)	0 (0%)
Did the input you receive from the Clinical Psychologist support you with your needs?	12 (80%)	3 (20%)	0 (0%)	0 (0%)
During your consultation with the Clinical Psychologist, were you able to openly talk about the issues concerning you most?	15 (100%)	0 (0%)	0 (0%)	0 (0%)

	Excellent	*Very Good*	Good	Fair	Poor
How would you rate the quality of care provided by the Clinical Psychologist?	12 (80%)	2 (13.3%)	1 (6.7%)	0 (0%)	0 (0%)

	Yes, always	Yes, sometimes	No
Did you feel that you were treated with dignity and respect by the Clinical Psychologist caring for you?	15 (100%)	0 (0%)	0 (0%)

	Very satisfied	*Fairly satisfied*	Neither satisfied or dissatisfied	Fairly dissatisfied	Very dissatisfied
Overall, how satisfied or dissatisfied were you with the service provided by the Clinical Psychologist?	13 (86.7%)	2 (13.3%)	0 (0%)	0 (0%)	0 (0%)

Table 3.png

The Incidence of Avid Lesions in Head and Neck Cancer Patients Undergoing Positron Emission Tomography-Computed Tomography Scanning

Poster

Ms. Abbie Carter [1], ***Mr. Huw Davies*** [2], ***Dr. Richard Webster*** [3], ***Dr. Rhian Rhys*** [4], ***Dr. Christopher Greenall*** [4], ***Mr. Mouli Doddi*** [2], ***Mr. Ali Salamat*** [2]

1. *Cardiff University,* ***2.*** *Cwm Taf Morgannwg University Health Board,* ***3.*** *Velindre Cancer Centre,* ***4.*** *Radiology department, Royal Glamorgan Hospital*

Aim

PET-CT has a valuable role in head and neck cancer (HNC) diagnosis, staging and assessing treatment response. However, full body scanning introduces the chance of avidity elsewhere, which can be 'false positive', but sometimes represents a previously undiagnosed synchronous malignancy. Currently, there is a lack of standardised protocol on how to manage these lesions. This study aims to determine the incidence, location, and outcome of incidental avid lesions on PET-CT scans for our HNC population.

Method

This was a retrospective case-control study of 281 patients undergoing staging PET-CT (stages T4, N3, or unknown primary) and/or treatment response PET-CT scans within our HNC service over an eight-year period (2013-2021). Clinicopathological information was collected and the location(s) of incidental avid lesions on PET-CT reports were recorded. Incidental avid lesions were defined as any increased avidity deemed unrelated, or indeterminate, to the confirmed primary site or regional neck lymph node spread. Further investigations were followed up to determine the outcome of the lesions.

Results

363 incidental avid lesions were reported in 369 scans. The most common location was the abdomen (30.0%), followed by thorax (28.9%). 33.1% of lesions had further investigation. 65.0% of all incidental avid lesions investigated were benign ("false positives"), with financial and psychological implications for the health service and patient. However, the rate of incidental synchronous primary was 3.6%; concordant with similar studies. Previously undiagnosed synchronous primaries were found in the lung, large bowel, thyroid and prostate, and were often early stage and highly treatable.

Conclusion

PET-CT scanning for HNC can reveal numerous incidental avid lesions which may turn out to be benign, malignant synchronous primaries, or metastatic foci of the known primary. Despite high false positive rates, we believe that the benefit of investigating carefully selected incidental PET-CT findings alongside prudent clinical judgement currently outweighs the burden of investigation, as additional diagnoses may impact overall patient management. Above all, this data demonstrates a need for a standardised pathway for stratifying incidental avid lesions in HNC services to ensure consistency of high-quality, evidence-based care for our patients.

The Late Effects Clinic for Patients with Complications of Head & Neck Cancer Treatment

Poster

Dr. Divya Sharma [1], ***Dr. Lisa Mcnally*** [1], ***Ms. Zoe Walker*** [1], ***Dr. John Collin*** [1]

1. *University Hospitals Bristol & Weston NHS Foundation Trust*

Aim

Radiotherapy and surgery are the main treatment modalities for Head & Neck Cancer (HNC). Late side effects include speech and swallowing difficulties, dental decay, and osteoradionecrosis of the jaws. These issues often require multi-professional management leading to multiple clinic appointments with specialists including restorative dentists, speech & language therapists, dieticians, and surgeons. Our aim was to set up a multidisciplinary clinic to manage HNC patients with late side effects of treatment to generate effective and holistic treatment plans, to make more efficient use of clinical resources, and to reduce clinic attendances and improve our patients' experience.

Method

A new "Late effects" clinic was created. This was run by a Consultant Oral & Maxillofacial Surgeon, a Consultant Restorative Dentist, and a Therapy Radiographer. They jointly reviewed patients that have suffered the late effects of HNC treatment, and formulated a multimodal treatment strategy for each individual.

Results

An NHS validated patient satisfaction survey was used to assess our patients' experience of the new clinic. 100% of patients rated the quality of care they received as excellent. 98% of patients rated the knowledge and expertise of the healthcare professionals who provided their care as excellent. 97% felt the clarity and helpfulness of communication from the healthcare professionals as excellent. 100% of patients rated their overall experience as very good.

Conclusion

The change implemented has resulted in fewer appointments with multiple specialists for HNC patients with less duplication of work, more time spent with patients to sufficiently address their concerns in a holistic manner, and more efficient use of head and neck specialty resources. Patient satisfaction surveys thus far have yielded excellent results, and referrals from other units have been received. Co-location of ENT, Oncology and speech and language therapy colleagues and clinics to our department would further benefit HNC patients, particularly those with chronic side effects or recurrence

The nomenclature of the symptoms of Head and Neck Cancer - A Systematic Scoping Review

Poster

Dr. Paula Bradley [1], ***Ms. Ying Ki Lee*** [2], ***Prof. Jo Patterson*** [3], ***Prof. Vinidh Paleri*** [4]

1. *Newcastle University,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust,* ***3.*** *Liverpool University,* ***4.*** *The Royal Marsden Hospital*

Aim

Evolution of a patient-reported symptom-based risk stratification system to redesign the suspected head and neck cancer (HNC) referral pathway (EVEREST-HN) (1) will use a broad and open approach to the nomenclature and symptomatology. It aims to capture and utilise the patient's own description and language in a modern way to identify patients' clinical problems more effectively and risk stratify the patient, rather than via a tick on a referral form, which leads to an automatic one size fits all specialist out-patient appointment within two weeks. This scoping review aims to produce a comprehensive collection of the terminology related to the symptoms associated with HNC patient presentations to help inform the development of EVEREST-HN.

Method

The review followed the PRISMA checklist for scoping reviews.

A search strategy was carried out using three electronic databases (Medline, Embase and Web of Science) between January 1st 2012 and October 31st 2023.

All titles, abstracts and full paper eligibility were screened by PB with a 10% check by YL. The full papers were reviewed by both PB and YL reviewing all full papers for inclusion using predetermined criteria. Any decisions about inclusion which were not in agreement were discussed and reviewed.

Following full paper selection, data was extracted pertaining to the aims, type of study, cancer type, numbers of patients included and symptoms, presenting complaints or signa and symptoms pertinent to referral criteria which the publication included. YL checked the data extraction table completed by PB against the full papers.

Results

There were 9,331 publications identified in the searches once duplications were removed. Following title screening 350 abstracts were reviewed for inclusion of these 120 were considered for eligibility for the review. There were 48 publications considered meeting the eligibility criteria and therefore included in the final review.

The publications selected included data from almost 11,000 HNC patients. Twenty-one of the publications were from the UK, most of these were retrospective examination of patient records concerned with the function of the English two-week wait or the Scottish urgent suspicious of cancer pathway.

Data was extracted and charted according to the anatomical area of the head and neck where the symptoms are subjectively and objectively found, this is done in a way that presents patient or lay terms for symptoms, clinical terms for symptoms and the language of objective clinical findings like neck lumps and ulcers.

Conclusion

Symptoms of HNC are common presenting complaints in primary care, interpreting these along with clinical history, examination and risk factors will inform a clinician's decision to refer as suspected cancer. Head and Neck specialists believe a different way of triaging the volume of referrals is needed to assess the clinical risk of an undiagnosed HNC over and above the referral based on primary care assessment. EVEREST-HN aims to achieve this using the patient history of their symptoms. This review has highlighted issues in terms of what is considered a symptom, a presenting complaint and a clinical finding or sign. The way patients describe their symptoms will be crucial along in combination with other modalities like digital photography, voice recordings and the potential of artificial intelligence, to develop a more a more sensitive triage system.

Reference (if applicable)

1. Evolution of a patient-reported symptom-based risk stratification system to redesign the suspected head and neck cancer referral pathway [Available from: https://www.royalmarsden.nhs.uk/everest-hn].

The pathogenesis of HPV within oropharyngeal cancer

Poster

Ms. Mary-Anne Freckleton [1], Ms. Rebecca Hanwell [1], Dr. Laurice Fretwell [1], Dr. Thomas Illingworth [1], Dr. David Boocock [2], Dr. Gillian Knight [3], Dr. Amandeep Mann [4], Mr. Thomas Hatfield [4], Ms. Sophie Wilkinson [4], Mr. Raguwinder (Bindy) Sahota [4], Ms. Elizabeth Marsh [1]

1. *University of Derby,* ***2.*** *Nottingham Trent University,* ***3.*** *Royal Holloway, University of London,* ***4.*** *University Hospitals of Derby and Burton*

Aim

Human papillomavirus (HPV)-positive oropharyngeal cancers (OPCs) of the base of the tongue and tonsils are increasing. The prevalence of oral HPV infection within healthy individuals may be as high as 35%, and is linked to alcohol consumption, smoking, age, and sexual behaviours, with men at greater risk. We do not know the natural history of the virus in the oropharynx, and there are few prospective studies of the pathogenesis of an oral HPV infection; we aim to investigate this within the healthy oral mucosa and identify a panel of biomarkers suggestive of HPV-mediated cellular changes.

Method

We have established a clinical study on the NIHR-portfolio. Non-cancerous tonsils, a tonsillar swab, and a lifestyle questionnaire are collected from adults undergoing routine tonsillectomy surgery at Derby, Burton, Leicester, Telford, Calderdale, and Nottingham hospitals. We use a modified HPV-DNA qPCR screen to determine HPV-status. Viral type and load of HPV-positive specimens are analysed by qRT-PCR. We are using SWATH mass spectrometry to characterise protein biomarkers present in HPV-positive tissues in a non-biased approach

Results

Our study will describe oral HPV prevalence and pathogenesis within our prospective cohort. To date, our data suggests an oral HPV prevalence of 8% (n=88). HPV status is mostly concordant in both the left and right tonsils; however, positivity varies across sections of the same tissue. With active recruitment in six centres, we hope to quickly build on our promising initial data, and continue to expand our understanding of the pathogenesis of HPV.

Conclusion

Our data demonstrate that HPV is prevalent and active within the oropharynx, specifically the tonsils, of our prospective cohort of healthy individuals. Multivariate analysis will allow identification of populations at risk of HPV-mediated disease who would benefit from further intervention, and monitoring for HPV-induced cellular changes. As we continue to recruit and collect more data, results generated will inform further research into HPV and OPCs and help progress our knowledge and treatments of this disease.

The Post-Treatment Pathway provided by Guy's Hospital (GSTT) and the South East London Community Head and Neck Team (CHANT) – The Patient's Perspective

Poster

Ms. Yan-Yee Sung [1], ***Mr. Richard Lord*** [1]

1. *Guys and St Thomas NHS foundation trust*

Aim

Speech and Language Therapists (SLT) and Dietitians' input are essential following treatment for head and neck cancer to manage swallowing/nutrition/hydration and to promote outcomes with earlier intervention (Zuydam et al, 2022). CHANT is a unique service offering multidisciplinary rehabilitation for patients closer to home (within a clinic setting/at their home). Patients are reviewed by a Dietitian and SLT at Guy's Cancer Centre whilst on-treatment. In the first 2 weeks post-treatment, patients are reviewed weekly by a CHANT SLT and Dietitian at the Cancer Centre. Patients are also reviewed by a Clinical Nurse Specialist/Advanced Practitioner Radiographer on this day. Patients need to navigate different locations within the Cancer Centre for their reviews. After these 2 weeks, patients are reviewed at their local CHANT clinic. Verbal feedback from patients/clinicians suggests the current service model is confusing and disjointed.
This project aims to obtain and evaluate patient experiences of this pathway.

Method

A questionnaire was designed by SLT and Dietitian and approved by the Patient Experience Team at GSTT. Between May 2023 to January 2024, the opinions of 32 patients who had completed treatment were provided with a paper questionnaire, prior to entering their week 2 post-treatment review with a SLT and Dietitian. All patients had been reviewed by other disciplines in a different location (week 1 and week 2 post-treatment) before receiving the questionnaire and entering their week 2 review. Part-way through data collection, on-treatment SLTs also began reviewing patients alongside CHANT SLTs during the post-treatment phase. Offering the questionnaire at this stage ensured patients had experienced the pathway prior to completing the questionnaire. It was a clinician's discretion as to whether questionnaires were provided to patients. Upon completion, answers to the questionnaire were inputted onto Civica Neartime Feedback system. The system automatically analysed the data for trends and published results.

Results

32 questionnaires were completed. 27 patients received radiotherapy, 9 patients received radiotherapy and induction/concomitant chemotherapy, and 12 patients received primary surgery followed by adjuvant radiotherapy. 15 patients (48%) were aged 65+. 14 (44%) patients felt directions to their CHANT appointment were clear (Figure 1). 13 (41%) patients felt they were provided with clear information about the CHANT service. 7 (22%) patients were not aware they would be seeing clinicians from a different service to those they had seen during previous appointments; 5 (16%) patients either did not know/could not remember whether this was the case. 18 patients (59%) expressed preference for one appointment where all clinicians' reviews are one after the other (Figure 2). 14 patients (45%) expressed a desire to be reviewed in the community setting for their post-treatment reviews (Figure 3). Overall service satisfaction rating was 85%. 20 (66%) patients rated their recent appointment as 'very good'.

Conclusion

Findings demonstrate overall satisfaction with the service. Responses show potential improvements could be made to the post-treatment pathway:

- Better information provided about the CHANT service i.e. timing/delivery of information, description of, directions to, and change in service provision(s).
- To explore the potential for multiple reviews to take place in the same location (floor).
- Preferred follow-up responses varied therefore reviewing these may personalise care to better meet individual's needs.

It is unclear whether participants were aware of the transfer of care from on-treatment clinicians to CHANT clinicians, including the part-way provision change for SLT input. Participant numbers were limited owing to patients being unwell and/or not attending their week 2 post-treatment review with SLT and Dietitian. These factors may have impacted result validity.
Future plans include ways to gather more qualitative data on patient experience (e.g. interviews) and to inform relevant stakeholders of findings in order to provide better personalised care.

Reference (if applicable)
Zuydam AC, Lowe D, Rogers SN. Evaluation of the head and neck cancer patient concerns inventory in a cohort of patients attending routine multidisciplinary speech and language therapy/dietitian follow up clinics. Front Oral Maxillofac Med 2022;4:3. Available from: doi:10.21037/fomm-21-81

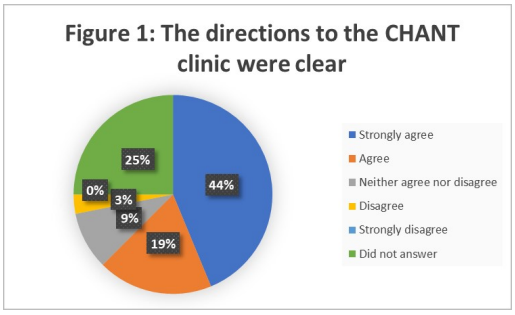


Figure 1.jpg

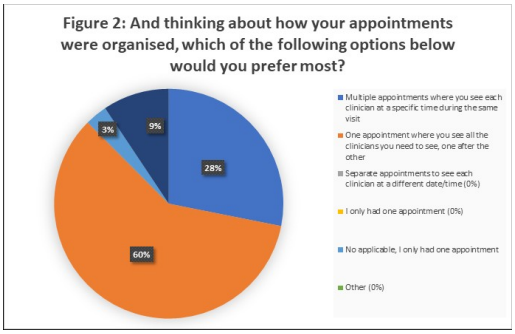


Figure 2.jpg

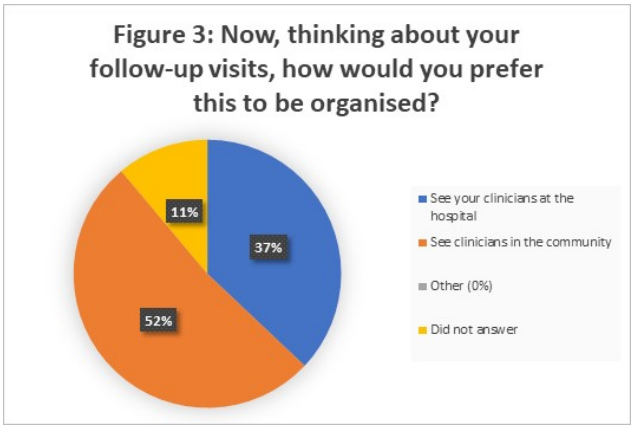


Figure 3.jpg

The relationship between psychological inflexibility, health-related quality of life and psychological distress in a sample of patients referred to a community head and neck cancer psychology service.

Poster

Dr. Darren Reynolds [1]

1. *Guy's & St Thomas' NHS Foundation Trust*

Aim

Patients with head and neck cancer (HNC) experience significantly more psychological distress and poorer health-related quality of life (HRQoL) compared to the general population [1]. One process that may be theoretically important when considering how HNC patients are affected by or cope with ongoing difficulties following their cancer treatment is that of 'psychological flexibility' [2].

Psychological flexibility refers to the ability of being open to and accepting of unpleasant internal experiences (e.g. thoughts, body sensations, and feelings) that arise in the present moment, and choosing to respond to these in such a way that is in line with one's underlying personal values and committed action. 'Psychological inflexibility' refers to the inverse of this process (Figure 1). Routine clinical outcome measures collected at baseline for patients referred to the Community Head and Neck Team (CHANT) psychology service were analysed to examine the relationship between psychological inflexibility and HNC patient outcomes.

Method

A quantitative analysis of routine baseline clinical outcome measures completed by HNC patients referred to the CHANT psychology service between October 2022 and January 2024 was conducted. Referred patients completed a series of 5 self-report questionnaires which included the Acceptance and Action Questionnaire-II (AAQ-II) to measure psychological inflexibility, the Patient Health Questionnaire-9 (PHQ-9) to measure symptoms of low mood, the Generalised Anxiety Disorder-7 (GAD-7) to measure symptoms of anxiety, the Functional Assessment of Cancer Therapy – Head & Neck Version 4 (FACT-H&N) to measure HRQoL, and the Perceived Stress Scale (PSS-10) to measure perceived stress.

Mean values and standard deviations for each outcome measure were calculated for all patients, and for patients with "low psychological inflexibility" and "high psychological inflexibility" based on whether their scores on the AAQ-II fell above or below the mean AAQ-II score. Bivariate correlation analyses were also performed for all outcome measures.

Results

A total of 58 HNC patients who were referred to the CHANT psychology service completed routine baseline outcome measures after their initial assessment session of which 30 patients were male (51.7%) and 28 were female (48.3%). The age range of the patients was 24–80 years old (M=58.00, SD=12.71). Mean values and standard deviations for each outcome measure are shown in Table 1.

Independent-samples t-tests were conducted to analyse differences in mean scores between "low psychological inflexibility" HNC patients and "high psychological inflexibility" HNC patients on each of the clinical outcome measures (Table 1). Pearson's correlations were also used to examine relationships between pairs of outcome measures (Table 2). Both analyses indicated that HNC patients who had higher levels of psychological inflexibility were found to have increased symptoms of low mood, increased symptoms of anxiety, poorer HRQoL, and higher levels of perceived stress.

Conclusion

The results highlight that psychological inflexibility plays an important role in the quality of life of patients recovering from HNC and should be assessed to highlight patients who may require additional support following their cancer treatment. The findings also suggest potential treatment targets for psychological interventions to improve the quality of life for this patient group. Acceptance and Commitment Therapy (ACT) which has the primary aim of increasing psychological flexibility, and hence lowering psychological inflexibility, may lend itself well to patients recovering from HNC.

Reference (if applicable)

[1] Hammermüller, C., Hinz, A., Dietz, A., Wichmann, G., Pirlich, M., Berger, T., Zimmermann, K., Neumuth, T., Mehnert-Theuerkauf, A., Wiegand, S., & Zebralla, V. (2021). Depression, anxiety, fatigue, and quality of life in a large sample of patients suffering from head and neck cancer in comparison with the general population. *BMC cancer*, *21*(1), 94. https://doi.org/10.1186/s12885-020-07773-6

[2] Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. Behaviour Research and Therapy, 44(1), 1-25.

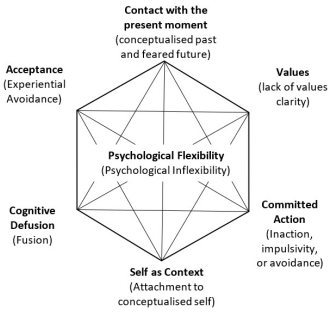


Figure 1 - The Hexaflex model of ACT illustrating the core processes underlying 'psychological flexibility' with processes in parentheses illustrating 'psychological inflexibility'.

Figure 1.jpg

Outcome Measure	Subscales	Total Score	Total Sample (n = 58) *M (SD)*	Low Psychological Inflexibility Group (n = 31) *M (SD)*	High Psychological Inflexibility Group (n = 27) *M (SD)*	*p* value
Psychological Inflexibility (AAQ-II)	-	49	27.57 (11.08)	19.03 (5.04)	37.37 (7.28)	***
Patient Health Questionnaire - 9 (PHQ-9)	-	27	12.03 (6.68)	8.86 (4.78)	15.89 (6.53)	***
Generalised Anxiety Disorder - 7 (GAD-7)	-	21	10.60 (6.14)	7.68 (5.31)	13.96 (5.32)	***
Functional Assessment of Cancer Therapy – Head & Neck (FACT-H&N Version 4)*	Physical Well-being	28	17.14 (6.71)	20.74 (4.29)	13.00 (6.64)	***
	Social/Family Well-being	28	14.90 (5.70)	16.35 (4.98)	13.22 (6.07)	*
	Emotional Well-being	24	12.88 (5.69)	15.77 (4.71)	9.56 (5.24)	***
	Functional Well-being	28	10.33 (5.28)	13.06 (4.09)	7.19 (4.75)	***
	Head & Neck Cancer	40	20.26 (8.94)	23.77 (8.29)	16.22 (8.03)	***
	FACT-H&N TOI	96	47.88 (17.81)	57.58 (13.67)	36.74 (15.46)	***
	FACT-G Total	108	55.26 (18.64)	65.94 (12.47)	43.00 (17.05)	***
	FACT-HN Total	148	75.66 (24.99)	89.71 (18.43)	59.52 (21.72)	***
Perceived Stress Scale – 10 (PSS-10)	-	40	22.57 (k7.60)	18.52 (6.71)	27.22 (5.72)	***

** p < 0.05, ** p < 0.01, *** p < 0.001*

Table 1 - Summary of baseline outcome measures for patients and comparison of mean scores based on level of psychological inflexibility

Table 1.png

	1 *r* (p)	2 *r* (p)	3 *r* (p)	4 *r* (p)	5 *r* (p)
1. Psychological Inflexibility (AAQ-II)	--				
2. Patient Health Questionnaire - 9 (PHQ-9)	.74**	--			
3. Generalised Anxiety Disorder - 7 (GAD-7)	.70**	.76**	--		
4. Functional Assessment of Cancer Therapy – Head & Neck (FACT-H&N Version 4)*	-.76**	-.77**	-.56**	--	
5. Perceived Stress Scale – 10 (PSS-10)	.77**	.70**	.73**	-.59**	--

*** p < 0.01*

Table 2 -Summary of correlations among baseline outcome measures.

Table 2.png

The Safety And Efficacy Of Fluoroscopic Guided Balloon Dilatation For Radiation-Induced Pharyngo-Oesophageal Strictures

Poster

Mr. Anand Goomany [1], ***Ms. Nikoleta Skalidi*** [1], ***Ms. Emma Richards*** [1], ***Ms. Emma Watts*** [1], ***Mr. Jonathan Fussey*** [1], ***Mr. Neil Sharma*** [1], ***Mr. Paul Pracy*** [1], ***Mr. Chris Jennings*** [1], ***Prof. Hisham Mehanna*** [1], ***Dr. Robert Jones*** [1], ***Dr. Naveen Condati*** [1], ***Mrs. Joanne Wheeler*** [1], ***Dr. Camilla Dawson*** [1], ***Mr. Paul Nankivell*** [1]

1. *University Hospitals Birmingham*

Aim

Radiotherapy, either alone or combined with surgery and/or chemotherapy, is an integral part of the oncological treatment for head and neck cancer. However, upper aerodigestive tract mucosal toxicity frequently results in radiation-induced dysphagia, affecting up to 40% of patients. Post treatment pharyngo-oesophageal strictures have a significant impact on patients' quality of life. While standard antegrade dilatation techniques offer adequate functional improvement for the majority of patients, this is not possible in a distinct subset due to factors such as poor access (e.g. trismus, restricted neck extension) or the presence of pinhole stenoses. In conjunction with interventional radiology, fluoroscopic guided balloon dilatation has evolved at our institution as a valuable modality in addressing these challenges.

This study evaluates the safety and clinical effectiveness of fluoroscopic guided balloon dilation in patients with pharyngo-oesophageal strictures after radiation therapy for head and neck cancer in a tertiary centre.

Method

A retrospective case note analysis was performed on all patients undergoing the procedure at University Hospitals Birmingham between January 2010 and January 2021.

Data included demographic information, clinical characteristics, initial tumour stage and treatment, time of onset of dysphagia, dilatation frequency, indication for fluoroscopic guided dilatation and complication rate. All patients underwent a swallowing assessment with video fluoroscopy or barium swallow prior to the procedure. Technical success was defined as successful balloon dilatation using at least a 14mm balloon. Functional improvement was assessed through changes in the International Dysphagia Diet Initiation (IDDSI) score.

Standard descriptive statistics concisely summarised clinical characteristic data, while paired t-tests compared pre- and post-dilatation IDDSI scores.

Results

Twenty-two patients (male:female ratio 3:1, average age 68 years) with primary tumour sites in the hypopharynx, larynx, oropharynx and oral cavity underwent 46 fluoroscopic guided balloon dilatations after unsuccessful attempts with standard techniques. Indications for fluoroscopic balloon dilatation included: difficult stricture visualisation due to poor neck extension (n=6) and trismus (n=5), tight stricture not permitting bougie dilatation (n=6), complete luminal obstruction (n=1) and unclear (n=4). Twenty-one patients received (chemo)radiotherapy with one having primary surgery only. The mean interval between treatment completion and first dilatation was 24 months and the average number of dilatations per patient was 4.3. Technical success was achieved in 21 out of 22 patients, with failure in one patient with complete luminal obliteration. Seventeen patients had IDDSI scores recorded. Clinical success, indicating improvement in dysphagia, was observed in 14 patients (p=0.012). No complications were reported in any of the patients.

Conclusion

Although recurrence rates requiring repeat dilatation are notable, the simplicity and safety of fluoroscopic

guided balloon dilatation mean it should be considered as a viable therapeutic option for strictures refractory to standard antegrade dilatation techniques.
The advantages of fluoroscopic guidance over standard antegrade endoscopic approaches are evident in its ability to provide a comprehensive overview of stricture anatomy through the use of contrast medium, facilitating precise positioning of the balloon catheter at the narrowest segment of the stricture. Additionally, visual control of the entire balloon catheter under fluoroscopy contributes to a reduced risk of rupture, further enhancing the safety profile of the technique.
Our findings aim to inform the multidisciplinary approach to managing these challenging cases, with the potential to optimise patient outcomes and enhance overall quality of life.

The surgical outcomes of robotic excision of parapharyngeal and retropharyngeal tumours

Poster

Mr. Stephen Robertson [1], ***Mr. Jack Faulkner*** [1], ***Dr. Philip Touska*** [1], ***Mr. Aleix Rovira*** [1], ***Mr. Alastair Fry*** [1], ***Mr. Ricard Simo*** [1], ***Mr. Jean-Pierre Jeannon*** [1], ***Mr. Asit Arora*** [1]

1. *Guy's & St Thomas' NHS Foundation Trust*

Aim

Robotic surgery is currently transforming Head and Neck cancer surgery by providing novel approaches to previously challenging procedures, with a wide range of benefits including reduced morbidity and length of stay for patients. Extended applications are constantly being evaluated to advance the scope of robotic surgery further, which includes using it for parapharyngeal (PPS) and retropharyngeal space (RPS) tumours. Literature suggests over 50% of PPS tumours are pleomorphic adenomas, whereas RPS tumours often represent nodal metastasis or soft tissue inflammatory masses(1,2). We have collated a case series of thirteen patients who had either PPS or RPS tumours excised via robotic surgery to allow assessment of TORS as a surgical approach to these pathologies.

Method

A prospective analysis of fourteen patients collected between October 2018 and 2023 with retrospective swallow assessment, for all patients with a mass in the PPS or RPS treated by trans-oral robotic surgery.

Results

The average age was 51yrs (10 males, 4 females), with an average radiological tumour diameter of 3.72cm and volume of 34.07cm^3. 31% of PPS cases were pleomorphic adenoma, whilst 31% of cases were malignant (carcinoma ex-pleomorphic adenoma) with a further case of unknown malignant potential. There was no surgical capsular breach, with complete excision in all cases and no cases required conversion to open. Close margins were seen in 43%. Median length of stay was 2 days and only one patient required NG-tube insertion. There have been no recurrences with mean follow up currently at 2.44years.

Conclusion

This demonstrates that TORS provides a safe and feasible option for excision of both PPS and RPS tumours, with no sacrifice of surgical or oncological outcomes. Given the successful results, further adoption of TORS for PPS and RPS tumours is recommended. Careful patient selection and specialist radiological input to aid three-dimensional anatomical understanding are fundamental to these outcomes.

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The swallowing and speech after robotic head and neck surgery – Does the site impact the outcome?

Poster

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Aim

Compare the functional outcome for swallowing and speech in each site of transoral robotic surgery (TORS) within the head and neck unit.

Method

Retrospective cohort study for patients who underwent TORS within the head and neck unit over 7 years. Patients were assessed at four different time points (one day, one month, six months, and twelve months, respectively) with bedside/office testing. Methods of testing for swallowing assessment were by the International Dysphagia Diet Standardization Initiative (IDDSI), and speech assessments were carried out using the Understandability of Speech score (USS). Changes in IDDSI levels over the first year were divided into no changes, minor and major changes. Outcomes were compared to patient-specific pre-treatment baseline levels. These results were cross-referenced against the site of resection, the extent of resection, concomitant neck dissection, and postoperative complications. The impact of revision robotic surgery and/or postoperative adjuvant radiotherapy on swallowing and speech was monitored within the first year of primary resection. Chi-square tests were used for statistical analysis.

Results

68 patients were included. 75% and 40% of the patients resumed normal fluid intake and normal diet immediately after surgery. 8.8% required a temporary feeding tube, with 1% required gastrostomy. There was a significant improvement in liquid and diet within the first year of surgery. There was a steep improvement in diet between 3-6 months. Supraglottis site resection had the worst functional outcome. The neck dissection without complications didn't significantly change the outcome of swallowing. Irrespective of the primary resection site, the changes in liquid and diet with radiotherapy were not significant.

Conclusion

Fluid and diet consistency dropped significantly following the majority of transoral robotic surgery with more noticeable diet changes. Early deterioration in diet is temporary and manageable with a modified diet. Rapid recovery of swallowing is achieved before the first year. There is no long-term effect on speech.

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The use of scapular tip flaps in the reconstruction of head and neck cancer defects: systematic review and meta-analysis

Poster

Mr. Umar Rehman [1], ***Dr. Amber Dhoot*** [2], ***Dr. Alexandra MacKenzie*** [3], ***Dr. Oluwasemilore Adebayo*** [4], ***Mr. Mohammad Sarwar*** [5], ***Prof. Peter Brennan*** [6]

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Aim

Scapular tip flaps (STF) may be used as an alternative to traditional methods of reconstruction of head and neck cancer (HNC) defects. This study aimed to establish the success and complication rates for STF in HNC reconstruction.

Method

A literature search was conducted on PubMed, BMJ Journals, DARE, EMBASE databases and Cochrane (CENTRAL) register. (Registry CRD42023428012).

Results

23 studies fulfilled the inclusion criteria with 474 patients who underwent reconstructive procedures using the STF. 100% of STF used were free flaps (STFFs). The most common reason for reconstruction was following malignancy (81.4%, n=386). The pooled success rates in all studies using scapular tip flaps in head and neck reconstruction was 99% (95% CI, 97-100, p=1.00; I^2 = 0). Pooled total complication rates were 38% (95% CI, 25-51, p<0.01; I^2 = 90%). 19.6% required return to theatre with only 0.8% being for repeat flap coverage.

Conclusion

The STF demonstrated an overall success rate of 99%. This is higher than other documented success rates with mainstay flaps for HNC defect reconstruction. Complication and re-operation rates were also like recorded rates. This review demonstrates the advantage of STF as a safe and versatile reconstructive option for HNC related defects. Evaluation of the literature is limited by poor-quality studies and comparability bias.

The use of supermicrosurgery in head and neck cancer soft tissue reconstruction: a systematic review of the literature

Poster

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Aim

Supermicrosurgery is an evolving approach in the soft tissue reconstruction of head and neck (HN) cancer defects. This study is a systematic review which evaluated the use of supermicrosurgery for arterial or combined arterial and venous anastomoses in the soft tissue reconstruction of HN cancer defects with associated success, overall complication and re-operation rates.

Method

A literature search was conducted on Pubmed, Dynamed, DARE, EMBASE, Cochrane and the British Medical Journal (BMJ) electronic databases. (Prospero ID: CRD42023476825).

Results

Four studies fulfilled the inclusion criteria with 15 patients who underwent soft tissue reconstructive procedures for HN cancer using supermicrosurgery. 16 flaps were performed on these 15 patients, with the most common flaps being superficial circumflex iliac artery perforator (SCIP) flaps (n=11, 68.8%) and superficial inferior epigastric artery (SIEA) flaps (n=2, 12.5%). 1 patient required both a SCIP and a two-island anterolateral thigh (ALT) flap. The most common malignancy requiring reconstruction was squamous cell carcinoma (n=6, 40.0%) followed by basal cell carcinoma (n=2, 13.3%) and parotid cancer (unspecified) (n=2, 13.3%). Flap success rate was 93.8% (n=15) with an overall complication rate of 6.3% (n=1). No re-operations were reported.

Conclusion

The use of supermicrosurgery for HN cancer soft tissue reconstruction has an overall success rate of 93.8%. This is commensurate with the traditional microsurgery for HN reconstruction. Complication and re-operation rates are comparable to previous literature. This study confirms the feasibility of supermicrosurgery as a safe and reliable reconstructive option for HN cancer defects.

Time from surgery to commencing adjuvant radiotherapy does not affect survival in patients with head and neck squamous cell carcinoma

Poster

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1. *The Christie NHS Foundation Trust,* ***2.*** *The University of Manchester*

Aim

Studies have reported inferior outcomes when adjuvant radiotherapy starts more than 6-8 weeks post-surgery for locally-advanced head and neck squamous cell carcinoma (HNSCC). The applicability of these studies may be limited due to the dichotomisation of time variables (e.g.,'on time' *vs* 'delayed' radiotherapy) either arbitrarily or based on the sample median. In clinical practice, healthcare professionals may not recommend radiotherapy when delays extend beyond this time, and instead advocate for observational approaches only.

This study aimed to assess the relationship between survival and the time interval between surgery and radiotherapy as a continuous variable. We hypothesised there would be no significant change in survival around either six or eight weeks post-surgery.

Method

An institutionally approved, retrospective review of prospectively collected data. Inclusion criteria: all patients with HNSCC who underwent curative-intent surgery followed by post-operative (chemo)radiotherapy at The Christie NHS Foundation Trust (UK) between Jan 2014 and Dec 2020. Patient, cancer and treatment data were collected. Time intervals of interest included (i) days from surgery to radiotherapy start and (ii) overall treatment time (OTT [days from surgery to radiotherapy completion]).

Demographic and cancer details were summarised using descriptive statistics. A multiple linear regression model was fitted to assess associations between patient / tumour characteristics and time from surgery to radiotherapy. The primary endpoint was overall survival (OS). A multivariable Cox Proportional Hazards (PH) model was fitted. Missing values were handled by multiple imputation using chained equations.

Results

386 patients were included; characteristics are shown in the Table.

The median time between surgery and radiotherapy start was 44 days (IQR: 14 days). 175 (45.3%) and 317 (82.1%) of patients commenced radiotherapy within six and eight weeks of surgery. On multivariable linear regression, time between surgery and radiotherapy start was not associated with any candidate covariate.

There were 154 OS events at a median of 1.65 years (IQR 2.46 years). For surviving patients (n = 232), median follow-up was 4.57 years (IQR 2.59 years). While log(hazard) for OS increased around 6 weeks post-surgery, the increase was small before falling again at 8 weeks-(Fig).

On multivariable Cox regression, the time interval between surgery and radiotherapy was not associated with OS (HR 1.00; 95% CI 0.99 - 1.01). A further model was fitted, with OTT as an alternative covariate; this too was not prognostic (HR 1.01; 95% CI 0.94 - 1.09).

Conclusion

In this study, neither an increasing time interval between surgical resection and commencing post-operative radiotherapy *nor* increasing OTT was associated with inferior OS for patients with resected HNSCC, when adjusted for demographic, clinical and treatment-related covariates. We recommend that patients are still considered

for adjuvant radiotherapy even in the presence of a delay post-surgery of > 6-8 weeks.

Characteristic	N = 386[1]
Age	65 (56, 71)
Unknown	1
Gender	
Female	120 (31%)
Male	266 (69%)
ECOG performance status	
0	94 (24%)
1	193 (50%)
2	79 (21%)
3	19 (4.9%)
Unknown	1
ACE-27 score	
0	166 (43%)
1	133 (35%)
2	64 (17%)
3	21 (5.5%)
Unknown	2
Smoking history	
Current	70 (19%)
Ex	214 (59%)
Never	80 (22%)
Unknown	22
IMD decile	3 (1, 7)
Unknown	3
H&N subsite	
Larynx	45 (12%)

Adjrt table.png

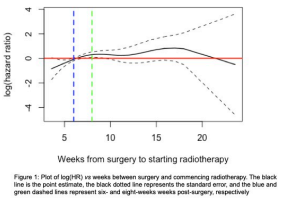

Figure 1: Plot of log(HR) vs weeks between surgery and commencing radiotherapy. The black line is the point estimate, the black dotted line represents the standard error, and the blue and green dashed lines represent six- and eight-weeks weeks post-surgery, respectively

Adjrt fig.jpg

Time from surgery to post-operative radiotherapy in head and neck squamous cell carcinomas at North Middlesex Hospital

Poster

Dr. Vaidehi Konteti [1], ***Ms. Shelly English*** [1], ***Dr. Atia Khan*** [1], ***Dr. Anna Thompson*** [1]

1. *North Middlesex University Hospital*

Aim

Post-operative radiotherapy (PORT), with or without concurrent chemotherapy, is offered to patients who have intermediate or high-risk pathological factors. PORT has shown to improve both locoregional control and overall survival in this cohort [1]. Head and neck cancer guidelines stipulate that PORT for squamous cell carcinomas (SCC) should commence within 6 weeks of surgery to obtain the maximal benefit [(2-3)]. Studies have shown that a prolonged total package time (defined as the number of days from surgery to the end of adjuvant radiotherapy) extending beyond 100 days negatively impacts both relapse free survival and overall survival[4].
The aim of this audit was to evaluate our institution's compliance against the following standards:

1. Time from surgery to start of radiotherapy within 6 weeks.
2. Overall treatment package time less than 100 days.

Method

Data was collected retrospectively over a two-year period from 1st August 2021 to 31st July 2023. Patients who underwent PORT were identified from the North Middlesex Hospital head and neck radiotherapy database and their notes were reviewed. Pertinent data points collected included: referring hospital, pathological subtype, tumour subsite, surgery date, date of dental assessment, date of consent for PORT, radiotherapy start and completion dates, radiotherapy duration and any reasons identified for delays in treatment.

Results

A total of 35 patients with SCC diagnosis underwent PORT over this time. The most common anatomical subsite and stage were oral cavity and 4a, respectively. Only one patient failed to complete the full six-week radiotherapy course. 50% (n=18) of patients started radiotherapy within the 6-week target. 60% (n = 21) underwent dental assessments and, where required, extractions either pre- or intraoperatively. Delayed dental was the exclusive cause of delay to PORT in only 1 case. The most common reason of delay was the development of a surgical complication (n =8), such as post-operative swelling and delayed wound healing. Other causes included late referral for radiotherapy from the surgical centre (n=3), patient preference (n=2), and the need for further diagnostic investigations or surgical excision prior to proceeding with PORT (n=2). In 99% (n = 34) of cases, the overall treatment package time was less than 100 days.

Conclusion

Timely initiation of PORT remains an ongoing challenge, and this is in line with data from a range of published studies [(5-6)]. Our time to PORT audit covering 2017-2018 showed only 37% of patients met the 6-week target. A significant proportion of the delays were due to the dental pathway. Since then, we have collaborated with our dental colleagues creating a robust dental pathway to improve this to the current 50%, where in most cases, the delay was unavoidable due to surgical or patient related factors. The <100-day TPT outcomes are excellent. Most of the late referrals for PORT came from surgical centres outside our network suggesting there is scope to streamline this pathway. The national head and neck cancer audit in 2014 reported a median time to PORT of 50 days[7]. A national re-audit of outcomes may be beneficial in reassessing current trends and outcomes in timing to PORT.

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TNM classification Comparison Study of Radiotherapy Peer Review against the MDT's. How reliable is retrospective TNM data captured from MDT outcomes?

Poster

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Aim

Accurate TNM classification and staging in head and neck cancer is an important part in prognostication, and in determining the extent of radiotherapy target volume delineation [1]. As standard of care, the TNM classification is performed in the multidisciplinary team (MDT) meeting, prior to referral to oncology for treatment. The MDT-recorded TNM data may be retrospectively requested for outcomes studies, audits or medico-legal purposes, indicating the importance of accurate data capture during MDT.

Peer review quality assurance of intensity modulated radiotherapy (IMRT) volumes is a recommended practice prior to start of treatment. As a tertiary cancer centre, there is routine radiologist input in the departmental oncology peer review of head and neck radiotherapy volumes [2]. The aim of this study was to evaluate the recommended treatment changes from the peer-review, and to appraise potential differences between the final peer-review's TNM classification and of the regional referring MDTs'.

Method

This study was a prospective evaluation of the performance of the joint oncology-radiology radiotherapy peer review, which commenced in May 2023. The departmental peer review meeting, as standard, consisted of 4 clinical oncologists and up to 3 specialist head and neck radiologists, who were also core members of the 2 referring regional supra-MDTs. All attempt was made to discuss the radical plans, or complex palliative cases.

All peer review data entry was prospectively performed, using a Royal College of Radiologists (RCR) recommended proforma [3]. Any clinical or radiological progression of disease (PD) on the IMRT-planning CT since the diagnostic radiological investigations (MRI or CT), was specifically noted. The RCR defined 'major' or 'minor' changes to the IMRT-contoured clinical target volumes (CTVs), if applicable, were documented. The final TNM classification (8th edition) was then applied and recorded at peer review, blinded to the original TNM data of the referring MDTs.

Results

There were in total 184 cases: 129 Definitive (chemo)IMRT, 50 post-operative radiotherapy (PORT), and 5 palliatives (Table 1).

In the definitive IMRT cohort, the median time from diagnostic scan to MDT, and from diagnostics to IMRT-planning CT, was 23 and 40 days (ranges: -3 to 109) respectively. Thirty-three patients (30%) were found to have PD, and 29 (26%) were upstaged (Table 2). Of note, only 12 patients with PD (36%) were subsequently upstaged, while 17 were upstaged from MDT despite lack of PD (59%). Two patients were down-staged. The upstaging led to 3 key changes: 2 were recommended primary surgery larynx cancer (from T3 to proven pT4a), and 1 patient for concomitant chemotherapy (N0 to N1).

The peer review recommended changes to altogether 124 (67%) plans; 89 (69%) within definitive IMRT, 32 (64%) PORT, and 3 (60%) palliative cohort. Overall, 84 (68%) were deemed 'major' and 40 (32%) 'minor' changes.

Conclusion

Radiotherapy peer review with radiologist input is valuable in identifying gross errors. The observed high rate of changes/recommendations from the peer review reflects an important and worthwhile clinical approach. Routine radiologist input, especially with the same core members from the referring MDT, can provide a layer of quality assurance to the original MDT's TNM classification, and the subsequent clinical management. The not insignificant number of upstaging and PD cases between the diagnostic imaging and the planning CT can be due to the progressive nature of head and neck squamous cell cancer. Whilst head and neck cancer can progress within weeks and thereby affecting the prognosis, the ability of MDTs to consistently manage all patients within reasonable time-line appears to be challenging.
No MDTs are run completely error free. Any retrospective survival outcomes that are solely based on MDT recorded data need to be carefully and critically appraised.

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	Number
Disease Site	
HPV Mediated Oropharynx	58
Oral Cavity	30
Larynx	29
Cutaneous carcinoma	15
Hypopharynx	15
Nasopharynx	12
Oropharynx (p16-)	8
Nasal Cavity and Paranasal Sinuses	6
Major salivary gland	5
Unknown Primary	3
Benign Pleomorphic Adenoma	1
Minor salivary gland	1
No. of undocumented TNM in MDT	
Definitive IMRT cohort	6
Post-operative radiotherapy	5
Unavailable MDT data (External sites)	8

Table 1: The Disease site and undocumented MDT

Table 1.png

	Number
Upstage (8th Edition TNM)	
Stage I – II	7
Stage I – III	4
Stage II – III	9
Stage II – IV	2
Stage III – IV	7
Individual T N	
T1 – T2	3
T2 – T3	7
T2 – T4	2
T3 – T4	4
N0 – N1	1
N0 – N2c	1
N1 – N2 (HPV)	3
N1 – N2b	2
N1 – N2c	1
Combined T & N upstage	4

Table 2: The upstaging overview.

Table 2.png

Total tumor volume as a reliable predictor of aggressiveness in multifocal micropapillary thyroid cancer

Poster

Ms. Ying Ki Lee [1], ***Ms. Lorenza Pasotti*** [1], ***Mr. Aleix Rovira*** [1], ***Mr. Ricard Simo*** [1]

1. *Guy's & St Thomas' NHS Foundation Trust*

Aim

Micropapillary thyroid carcinoma (mPTC) is generally associated with a more favourable prognosis and demonstrates lower aggressiveness when compared to other forms of papillary thyroid cancer (PTC). Multifocality, which is not uncommon in mPTC, is typically linked to poorer outcomes in PTC. This study aims to evaluate the effect of estimated total tumour volume (TTV) on patient outcomes in multifocal mPTC, proposing it as a more reliable predictor compared to assessing the size of the primary tumour alone.

Method

A retrospective study was conducted involving 91 T1a (mPTC) and T1b PTC patients who underwent thyroid surgery from 2012 to 2023. Subgroup analysis was performed according to the multifocality and TTV. TTV was estimated by summing the individual tumour volumes derived from the available tumour diameters. We applied 523mm3 as the cut-off value for TTV in subgroups (small and large TTV groups), derived from a 10mm tumour diameter, which conventionally distinguishes between T1a and T1b tumours.

Results

Among the 58 mPTC cases, 51.7% exhibited multifocality. Central and lateral neck metastasis were present in 22.4% and 8.6%, respectively. RAI treatment was required in 29.3% of cases, and recurrence occurred in 5.2%. In general, multifocal mPTC exhibits a higher rate of nodal metastasis (p=0.048) and a greater need for RAI treatment (p=0.048) when compared with the unifocal mPTC.

In subgroup analysis, there is no significant difference in outcomes between small TTV (TTV<523mm^3) multifocal mPTC and unifocal mPTC. Within multifocal mPTC, there is a higher rate of extrathyroidal extension (ETE) in the large TTV group (TTV>523mm^3) compared to those in the small TTV group (TTV<523mm^3). Multifocal mPTC with large TTV (TTV>523mm3) exhibits no statistically significant difference in terms of lymphovascular invasion, extrathyroidal extension (ETE), nodal metastasis, and recurrence when compared to the unifocal T1b PTC group.

Conclusion

Multifocal mPTC with large TTV exhibits more aggressive features than small TTV group and has similar outcomes when compared with unifocal T1b PTC. This study underscores the significance of incorporating total tumour volume as a predictor in patient outcomes, suggesting its practical value in clinical decision-making and emphasizing its superiority over relying solely on the size of the primary tumour.

Transoral robotic surgery with the Versius Robot: From preclinical to first in human experience.

Poster

Mr. Jack Faulkner [1], ***Mr. Jean-Pierre Jeannon*** [2], ***Mr. Aleix Rovira*** [2], ***Mr. Stephen Robertson*** [3], ***Mr. Asit Arora*** [2]

1. *1. Guy's & St Thomas' NHS Foundation Trust, 2. King's College University, London,* ***2.*** *Guy's & St Thomas' NHS Foundation Trust,* ***3.*** *Guys and St Thomas NHS foundation trust*

Aim

Transoral robotic surgery is well established and has an increasing role in head and neck surgery. Technological advancements has resulted in several new robotic platforms being developed. The Versius Surgical System (CMR Surgical, Cambridge, UK) is a commercially available robotic system that may be well suited to transoral surgery but is untested in this environment.

Method

This study prospectively evaluates Versius from dry lab preclinical evaluation to cadaver studies to first in human clinical experience and single centre case series following stages 0, 1 and 2a of the IDEAL framework of surgical innovation. Drylab and cadaveric assessment tested feasibility in key index procedures and optimal system setup, before undertaking first in human and initial case series evaluation using a prospective development framework with iterative adjustments.

Results

48 preclinical cadaveric procedures were successfully completed prior to first in human evaluation. 30 clinical TORS procedures (15 benign, 15 malignant) were successfully completed without significant intraoperative complication or conversion to open surgery. Setup time significantly decreased over the study period. Operative times were subjectively longer than with established systems. Instrumentation challenges were identified, urging the need for TORS-specific instruments. 4 arm TORS surgery was successfully performed in 5 cases.

Conclusion

TORS is feasible with the Versius Surgical System. The development of TORS-specific instruments would benefit performance and wider adoption of the system. 4-arm surgery is possible however further evaluation is required. Multicentre evaluation (IDEAL stage 2b) is recommended.

Transoral robotic surgery without adjuvant therapy: A systematic review and meta-analysis of the association between surgical margins and local recurrence

Poster

Mr. Andrew Williamson [1], ***Mr. Christy Moen*** [2], ***Mr. Afiq Slim*** [3], ***Ms. Laura Warner*** [4], ***Dr. Ben O'Leary*** [1], ***Prof. Vinidh Paleri*** [1]

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Aim

Close surgical margins are a risk factor for local recurrence (LR) and treatment failure after head and neck cancer resections. However, what constitutes a "safe" margin remains contentious, with one review noting 5 "close" definitions, ranging from 1-5mm.

Transoral robotic surgery (TORS) is increasingly employed to resect early-stage oropharyngeal squamous cell cancers (OPSCC) and has been explored as a single primary treatment to avoid the long-term toxicities after OPSCC treatment. For example, TORS without adjuvant therapy was recently employed in the ECOG-ACRIN E3311 trial, finding a 2-year progression-free survival of 96.9% in "low-risk" OPSCC. Due to the lack of unity on the definitions of "close" margins, many patients suitable for de-escalated treatment may receive post-operative radiotherapy.

We have performed a systematic review with meta-analysis describing TORS for OPSCC without adjuvant therapy, in particular describing the rate of close margins after TORS, and correlating these with the rate of LR.

Method

A literature search was conducted in MEDLINE, CINAHL, and CENTRAL from 01/01/2000 of studies containing patients with OPSCC treated by TORS without adjuvant therapy. Studies must have provided a definition of "close" margins. Primary outcome measure was proportion of close and positive margins, and rate of LR. Titles and abstracts were screened by two authors (n=232) and potentially eligible papers (n=96) underwent full text review.

Meta-analysis was performed using *metafor* in RStudio. Forest plots of pooled proportions were generated using Generalised Linear Mixed Models with logit transformations. The Clopper Pearson method was used for 95% confidence intervals. Heterogeneity was assessed using I^2 statistic. P-values <0.05 were considered significant. Pooled odds ratios (OR) were calculated using the Mantel-Haenszel method. Subgroup analysis was performed for close/ positive/ negative margins, <1mm/ <2mm margins, frozen sections, and HPV status.

Risk of bias assessment was conducted using the Methodological Index for Non-Randomised Studies (MINORS).

Results

269 articles were identified and 11 containing 406 patients were selected for inclusion. Heterogeneity was noted in the definition of "close" margins. Random-effects pooled rate of positive margins was 7% (95% CI 0.04-0.12, I^2=54%, p=0.02) and close margins was 7% (95% CI 0.02-0.27, I^2=86%, p=<0.01).

The random-effects overall rate of LR was 6% (95% CI 0.04-0.10, I^2=11%, p=0.35), 13% (95% CI 0.02-0.620, I^2=0%, p=1.0) after a positive margin, and 3% (95% CI 0.03-0.24, I^2=23%, p=0.26) after a close margin. Odds ratio (OR) for LR indicated higher risk of LR for positive compared to close margins (7.5; 95% CI 1.31-42.91, I^2=0%, p=0.51), and a slightly lower risk of LR between close and negative margins (2.22; 95% CI 0.67-7.38, I^2=0%, p=0.8).

A lack of frozen-section analysis (OR 2.91, p=0.36) and HPV-negative disease (OR 1.68, p=0.03) were associated with an elevated risk of LR.

Conclusion

This review has demonstrated an overall low rate of close and positive margins following TORS without adjuvant therapy for primary OPSCC, with a small incidence in LR. The results are somewhat hampered by a small number of series with heterogenous study design, insufficient follow-up, and a broad variety of close and positive margin definitions.

Due to variability in reporting, we were unable to determine an optimum “close” surgical margin definition, demonstrating a need for high-quality studies investigating a safe margin cut-off in the oropharynx. Consequently, our team at the Royal Marsden hospital and IReC have launched the SCORE study, an international, multi-centre, retrospective study of patients with early-stage primary oropharyngeal cancers managed by TORS with and without adjuvant therapy. This study has a particular emphasis placed on defining a “safe” margin cut-off that minimises the risk of recurrence in those managed by single modality surgery.

Reference (if applicable)

Carey (2021)Increased rate of recurrence and high rate of salvage in patients with HPV–associated oropharyngeal squamous cell carcinoma with adverse features treated with primary surgery without recommended adjuvant therapy.

Holcomb (2021) Impact of surgical margins on local control in patients undergoing single‐modality TORS for HPV‐related oropharyngeal squamous cell carcinoma.

Lörincz (2015) Functional outcomes, feasibility, and safety of resection of TORS.

Morisod (2017) Minimizing adjuvant treatment after TORS through surgical margin revision and exclusion of radiographic extracapsular extension.

Frederiksen (2021) Long-term survival outcomes after primary TORS with concurrent neck dissection for early-stage oropharyngeal squamous cell carcinoma.

Loon (2015) Outcome of TORS for stage I–II oropharyngeal cancer.

Viros (2020) TORS for squamous cell carcinoma of the oropharynx in a primarily HPV-negative patient population.

Waltonen (2022) Oropharyngeal Carcinoma Treated with Surgery Alone.

Weinstein (2012) TORS Alone for Oropharyngeal Cancer.

Warner (2022) TORS and neck dissection alone for head and neck squamous cell carcinoma.

Figure 2- *Top*- Forest plot summarising the overall rate of positive margins following transoral robotic surgery across the included studies. *Bottom*- Forest plot summarising the overall rate of close margins following transoral robotic surgery across the included studies. *Events= Local recurrence, CI= confidence interval.*

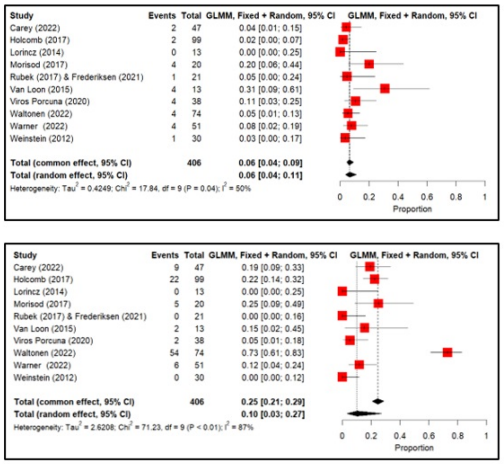

Figure 2.jpg

Figure 3- *Top*- Forest plot summarising the odds ratio (OR) for local recurrence after positive vs close margins following transoral robotic surgery without adjuvant therapy. *Middle*- Forest plot summarising the odds ratio (OR) for local recurrence after positive vs negative margins following transoral robotic surgery without adjuvant therapy. *Bottom*- Forest plot summarising the odds ratio (OR) for local recurrence after close vs negative margins following transoral robotic surgery without adjuvant therapy. *Events= Local recurrence, CI= confidence interval.*

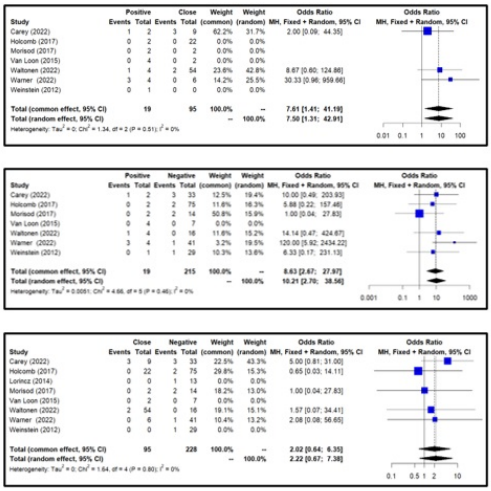

Figure 3.jpg

Figure 4- Forest plot summarising the odds ratios of local recurrence after transoral robotic surgery without adjuvant therapy in studies describing a <1mm and <2mm close margin cut off. *Events= Local recurrence, CI= confidence interval.*

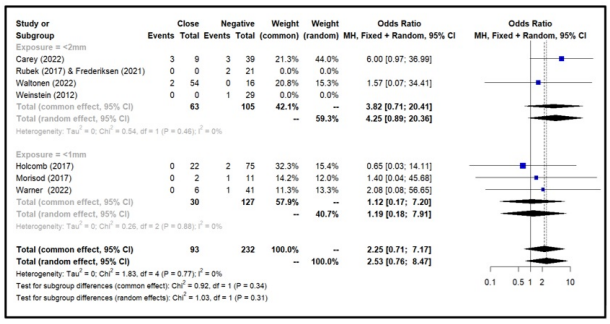

Figure 4.jpg

Trends and survival in laryngeal cancer in the West of Scotland 2014-2020: An anomaly in the progress of improved cancer survival?

Poster

Ms. Rhona Hurley [1], ***Ms. Catriona Douglas*** [1]

1. Department of Otolaryngology – Head and Neck Surgery, Glasgow Royal infirmary, Glasgow, UK

Aim

Laryngeal squamous cell cancer is an anomaly among cancers because survival trends have not improved in several decades despite changes in treatment modalities[1] A shift to transoral laser from radiotherapy in early disease and from total laryngectomy to organ preservation in more advanced disease has not yielded improvement in survival, with 5-year survival remaining at 60%-70%[2], and lower for advanced disease.[3] Although there has been a decrease in the incidence of larynx cancer, this has not been associated with a decrease in mortality[4]. This study aims to describe trends in laryngeal cancer treatment and survival in the west of Scotland and to compare these with trends elsewhere, examining patients with a minimum of three-year follow-up.

Method

Retrospective study of all patients diagnosed with laryngeal squamous cell cancer (LSCC) in the West of Scotland as identified from the MDT database from 2014-2020 to allow for minimum 3-year follow-up period. The MDT covers a population of about 2.5 million people. Patients with carcinoma in situ discussed at MDT were included if this recurred during their follow-up, or if they had co-existing malignant lymphadenopathy as it was assumed that invasive malignancy was simply not demonstrated on primary biopsy.

Electronic case records were reviewed to glean demographic data, staging data, treatment data and information on risk factors and comorbidities, factoring in population growth over this time period. The diagnosis rate was then evaluated on a yearly basis. Five-year survival based on time to death or time to most recent follow-up with appropriate censoring was calculated for all patients.

Statistical analysis of overall survival (OS) was performed in RStudio v4.3.1.

Results

867 patients were identified. Mean age was 65.5 year old (Range 21-97). 51% patients had supraglottic cancers, 37.6% had glottic disease, 9.3% had transglottic disease. 76.1% patients were treated with curative intent.

Five year OS was 47% for all patients(median survival at 57 months). Overall 5-year survival was 59% for patients treated with curative intent(median survival 71 months). Patients treated with palliative event had a 5-year OS of 3.7%(median survival 6 months)

Patients with late-stage disease(56%), treated curatively had a 5-year OS of 48% (median survival 58 months). No statistically significant difference in OS between treatment regimens (surgery only/radiotherapy only/surgery + radiotherapy/chemoradioptherapy/surgery + chemoradiotherapy) was observed. A worsening survival trend was observed from 2014 to 2020 (median survival 61 vs 39 months, HR 1.59, p=0.016).

Rate of diagnosis of supraglottic cancers increased from 1.28 per 100,000 population in 2014 to 2.81 per 100,000 population in 2020.

Conclusion

Laryngeal cancer remains an anomaly in the improving landscape of improved cancer survival.

We note in our cohort a statistically significant worsening survival between 2014-2020. There are several reasons for this.

Firstly, we note a higher proportion of supraglottic cancers compared with other cohorts, in which glottic cancers tend to be more prevalent. Glottic cancers have favourable survival outcomes, including in this cohort, likely due to their tendency to present earlier with 'visible' symptoms. The higher proportion of supraglottic cancers will certainly have an impact in this cohort.

Secondly, locally tend to present more commonly with advanced disease[5] . There are a variety of possible reasons for this including socioeconomic deprivation, lifestyle factors, frailty and comorbidities.
Concerningly, laryngeal cancer survival appears to have at best stagnated and in cohort worsened over the past several years. Further research is needed to advance outcomes in this head and neck cancer subtype.

Reference (if applicable)

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3 Timmermans A.J., Van Dijk B.A.C., Overbeek L.I.H., *et al.* (2016) Trends in treatment and survival for advanced laryngeal cancer: A 20-year population-based study in the Netherlands. In *Head and Neck* pp. E1247–E1255. John Wiley and Sons Inc.
4. Divakar P & Davies L (2022) Trends in Incidence and Mortality of Larynx Cancer in the US. *JAMA Otolaryngol Head Neck Surg* **1**, 34–31.
5 Li M.M., Zhao S., Eskander A., *et al.* (2021) Stage Migration and Survival Trends in Laryngeal Cancer. *Ann Surg Oncol* **28**, 7300–7309.

Triaging hoarse voices referred to the rapid access clinic – can artificial intelligence help?

Poster

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Aim

Cancer waiting times are currently at the longest they have ever been.[1] Deteriorating since 2013, they accelerated during the pandemic and CRUK showed that targets were not met in 2023.[2]

A multi-centre study demonstrated that telephone triage was safe and effective during the pandemic [3] but other studies found that patients presenting with a hoarse voice needed further examination.[4]

Hoarseness can account for up to 37.1% of referrals to a suspected cancer clinic. However, malignancy accounted for only 2.2-3.3% of all referrals. Clinicians can often tell whether a patient with a hoarse voice has a head and neck cancer when first seen in clinic, but our aim was to investigate whether artificial intelligence could correctly triage the recorded voices and safely identify the benign cases so they could be seen in a more appropriate clinic, allowing space for the higher risk patients.

Method

This was a single-centre prospective basic science pilot study conducted at Aintree University Hospital. Patients referred via a NG12 National Institute for Care and Excellence (NICE) referral form with hoarseness to our tertiary head and neck cancer centre were pre-identified by our local cancer services team.

Prior to the consultation and examination, the patient's voice was recorded on a security-coded trust iPhone with a microphone. The use of the iPhone device was restricted to audio recording only. The patients were asked to read the same standardised passage for audio recording.

These anonymised recordings were then sent to Salina Health, a medical Artificial Intelligence company, along with the gender, smoking history and diagnosis for evaluation.

They ran a number of analyses to see if they could find a model that could accurately identify the benign cases. The initial models used were a neural network model and decision tree model.

Results

The preliminary data showed that of the first 107 participants, 9 had a laryngeal cancer. 65 were female (1 cancer and 1 dysplasia) and 42 were male (5 cancer and 2 dysplasia).

This level of data is the minimum to allow any preliminary assessment of the concept and is limited by the low number of cases. However it does allow for an initial analysis to assess whether this is an avenue worth exploring.

A neural network model approach offered sensitivity of 44% and specificity of 85%. A decision tree model approach offered sensitivity of 78% and specificity of 91%.

Conclusion

The data shows that the decision tree model is the most effective of the two and demonstrates significant promise moving forward. With sufficient voice data and clinical diagnoses, we propose that the machine learning software will distinguish between the binary outcomes of cancer and no cancer to a high degree of accuracy.

Future work is needed to further explore the proof of concept by developing the accuracy of the machine learning software. This could allow further research into how the technology could be embedded within health care practices. Whilst at a basic level it could be used as a triage tool for patients with hoarse voice symptoms, the potential for a screening tool to improve the survival from larynx and hypopharynx cancer must be explored.

Reference (if applicable)

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Understanding the population of CHANT patients re-referred with delayed onset late effects from treatment

Poster

Ms. Katie Lee [1]

1. *Guy's & St Thomas' NHS Foundation Trust*

Aim

To feedback a 5 year Audit, providing a more detailed overview of patients presenting to the Community head and neck team service with delayed onset late effect symptoms from head and neck cancer treatment.
Aim of the audit is to identify any themes or patterns to support patients and services in making informed decisions around treatment including long term outcomes and service provision.

Method

Excel database audit across 5 years of CHANT delayed onset late effects data to identify who this population are and whether there are any themes/patterns to be identified when discussing late effects.

Results

On-going but will be completed by BAHNO. Results aim to show average amount of re-referrals into CHANT over the 5 years including frequency of patients returning multiple times and any themes regarding patient demographics/treatment that may impact likelihood of developing delayed onset late effect symptoms.

Conclusion

Aim is to conclude whether there are any patterns in patient demographics and treatments to support patients in making informed decisions and services in service provision including flagging patients deemed to be at higher risk of developing late effect symptoms.

Use of red light phototherapy in head and neck cancer management: A literature review

Poster

Ms. Sieuming Ng [1], ***Ms. Radhika Dua*** [1], ***Mr. Edwin Halliday*** [1], ***Mr. Mustansir Alibhai*** [1], ***Mr. Rafal Niziol*** [1]

1. *Guy's & St Thomas' Hospital*

Aim

Radiation-induced skin reactions, affecting around 87% of tumour radiotherapy patients, result in erythema and severe complications such as radioactive dermatitis (RD). Non-invasive aesthetic therapies, notably red light phototherapy (RLPT), have emerged as accessible options. This study delves into RLPT's current evidence and benefits, exploring its potential in managing head and neck cancer post-radiotherapy.

Method

A comprehensive literature review was conducted to investigate the applications and benefits of red light phototherapy in head and neck cancer patients. Electronic databases, including PubMed, Scopus, and Web of Science, were systematically searched using keywords such as "red light therapy," "red light phototherapy," "cancer", "radiotherapy" and "head and neck cancer."

Results

A Chinese study showcased RLPT's efficacy in reducing radiation dermatitis and relieving skin pain compared to conventional treatments. Another study, led by the University at Buffalo, highlighted photobiomodulation's ability to accelerate skin healing by 50% following radiation therapy, demonstrating reduced damage severity, inflammation, enhanced blood flow, and faster wound recovery by up to 19 days. An investigation into RLPT's impact on tumour growth, within a mouse skin cancer model with pre-existing malignancy, found no significant influence, suggesting safety in the presence of malignant lesions.

Conclusion

Through the amalgamation of present research outcomes, this review contributes insights into RLPT's potential application for head and neck cancer treatment post-radiotherapy, emphasising its promising role in alleviating radiation-induced skin complications and enhancing healing processes.

Using sequential Fibreoptic Endoscopic Evaluation of Swallowing (FEES) to enhance dysphagia rehabilitation following Head and Neck Cancer treatment; a case study.

Poster

Mrs. Kezia McFadyen [1], ***Ms. Ashlie Denison*** [1], ***Ms. Sally Archer*** [1], ***Ms. Alex Burrell*** [1]

1. *Guys and St Thomas NHS foundation trust*

Aim

Dysphagia remains the most common side effect of head and neck cancer treatment[1] • affecting 60 –75% of patients[2] and significantly impacting patients quality of life post treatment[3]. Those with oral and oro-pharyngeal tumours are at most risk of dysphagia[1]

Fibreoptic Endoscopic Evaluation of Swallowing (FEES) is an instrumental assessment of swallowing used by Speech and Language Therapists (SLTs) to enable accurate, in-depth assessment of dysphagia and evaluate dysphagia management through the use of therapeutic strategies and biofeedback. Despite the literature being supportive, there are very few community services providing FEES currently and a limited evidence base of use within this client group.

This case study presents the benefit of completing sequential FEES to enhance and guide dysphagia rehabilitation in a 58 year old male (P) treated with 65Gy in 30# radical chemoradiotherapy with concurrent cisplatin for a T4N2b squamous cell carcinoma base of tongue, p16 positive.

Method

P was referred to the community SLT team by the acute team on completion of cancer treatment. At referral, P was gastrostomy dependant and having therapeutic sips of water only. He was completing a standard programme of dysphagia exercises. A videofluoroscopy had been completed during week 3 of radiotherapy treatment, demonstrating a severe pharyngeal dysphagia with frequent incidences of aspiration, at times silent. FEES were completed at each community SLT rehabilitation session with 4 completed in 4 months (F1,F2,F3,F4) between 1-5 months post treatment completion. FEES were used to review and revise therapy programmes, guide progression of oral intake and for biofeedback to assist strategy implementation and decision making. Patient and clinician rated outcome measures were used to measure effectiveness including Penetration-Aspiration Scale (PAS)[4,] Yale Pharyngeal Residue severity rating scale[5], the DIGEST for FEES[6] and Performance Status Scale for Head and Neck(PSS-HN) cancer[7].

A patient experience questionnaire was also completed.

Results

Outcome measures:

Oral intake increased from sips of water in F1 (PSS-NOD 10) to Level 6 diet and thin fluids (PSS NOD 50) with no quantity restriction in F4. Dysphagia reduced from severe to moderate (DIGEST-FEES). Pharyngeal residue reduced with thin fluids but no change occurred with Level 4, remaining severe (Fig.1). PAS reduced (F1-8 to F4 -4) with no aspiration in F4 (Fig.1).

Biofeedback and therapy

Live images enabled biofeedback to implement effortful and clearing swallows and post swallow cough. Exercise technique was reviewed and revised as needed (Table 1).

Patient decision making and experience

Despite ongoing aspiration risk throughout F1-3, FEES assisted discussions to enable progression of intake with awareness of level of risk.
P reported FEES was really helpful in 'understanding how swallowing works', 'understanding which techniques help', 'decide what to eat and drink' and 'help motivate me to continue completing my swallowing exercises'.

Conclusion

This case study highlights a number of benefits of the use of FEES in a community rehabilitation setting. Despite limited change in parameters of the swallow mechanism, clear functional gain was evident. Improvements were noted in all clinical reported outcome measures and there is a clear progression with return to oral intake. This case study also demonstrates use of FEES for biofeedback and therapy reviews as well as aiding the patient experience and decision making. These may all account for improved dysphagia outcome.
The role of spontaneous recovery and reduction in treatment related side effects was not controlled for in this case study. Long term outcomes are not evaluated here which would benefit from examination in future research. Further studies are also warranted to determine the optimal FEES frequency within this patient group.

Reference (if applicable)

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2.Malagelada JR et al. World Gastroenterology Organisation Global Guidelines Dysphagia — Global Guidelines and Cascades (2014) Update. J. Clinical Gastroenterol;49:370–8
3.Rogers SN et al. Structured review of papers reporting specific functions in patients with cancer of the head and neck: 2006–2013. Br J Oral Maxillofac Surg 2016:1–7. doi:10.1016/j.bjoms.2016.02.012.
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7. List MA et al. (1990) A performance status scale for head and neck cancer patients. Cancer.66(3):564–9

Table 1 – summary of FEES assessments recommendations

Date	Fluid recommendations	Diet recommendations	Strategies	Rehab programme
Pre treatment	Normal fluids	Level 6 due to tumour presence	Nil	n/a
End of treatment	Therapeutic sips of water	nil	nil	On treat standard
F1 (6wks PT)	Therapeutic sips of clear fluids	Therapeutic teaspoons of level 4 diet	Multiple clearing swallows	Continue full repertoire with particular focus on base of tongue and airway protection
F2 (10wks PT)	Increase volume of thin fluids (with risk) – no restriction	Increase level 4 (with risk) – no quantity restriction	Chin tuck for clearing swallows Cough after every sip	Full exercise technique reviewed- and corrected. Increased base of tongue exercises
F3 (14 wks PT)	Thin fluids – no restriction – with risk	Level 5 – no quantity restriction	Intermittent strong cough post swallow with fluids Multiple clearing swallows with diet	No change to exercise regime
F4 (19wks PT)	Thin fluids - no restriction – with risk	Level 6 therapeutically – no quantity restriction	Intermittent strong cough post swallow with fluids Multiple clearing swallows with diet	Rationalise exercises to just airway protection and BOT

Table 1.png

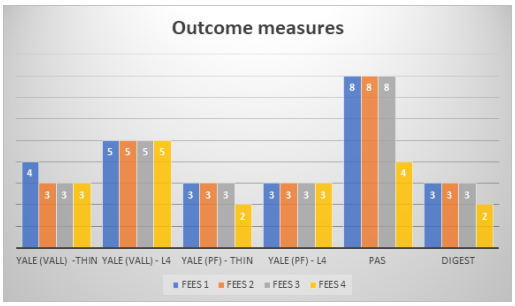

Figure 1.png

Vascularised tissue to reduce fistula after salvage total laryngectomy: a network meta-analysis

Poster

Mr. Andrew Williamson [1], ***Dr. Faizan Shah*** [2], ***Dr. Irene Beneran*** [3], ***Prof. Vinidh Paleri*** [1]

1. *The Royal Marsden Hospital,* ***2.*** *Queen Elizabeth University Hospital,* ***3.*** *Monklands University Hospital*

Aim

Salvage laryngectomy (sL) is associated with a high rate of post-operative complications, with one of the most challenging being pharyngocutaneous fistula (PCF). Transfer of pedicled and free vascularised tissue flaps is a commonly employed preventative method after sL. Vascularised tissues provide a dedicated blood supply, promote wound healing, and reduce post-operative inflammation that may predispose to fistulisation. Flaps may be introduced as "on-lay" (reinforcing the suture line) or as a patch to augment the neopharyngeal circumference. A prior systematic review demonstrated a rate of PCF after sL with primary closure of 31.2%, and 22.2% after flap reinforcement. Whilst not all studies demonstrated improved wound healing, the pooled relative risk was 0.63, indicating a 1/3 reduction in PCF incidence with vascularised tissue.

Our aim is to update a previous systematic review with a network meta-analysis, describing the rate of PCF after sL managed with and without vascularised flaps.

Method

A literature search was conducted in MEDLINE, CINAHL, and CENTRAL from 01/01/2003-01/01/2023 of studies containing patients with recurrent laryngeal and hypopharyngeal cancer managed by salvage laryngectomy and laryngopharyngectomy with and without vascularised flap-assisted closure. Primary outcome was rate of post-operative PCF after sL between primary or vascularised flap-assisted closure. Titles and abstracts were screened by three authors and potentially eligible papers underwent full text review.

Meta-analysis was performed using *metafor* in RStudio. A random effects meta-analysis was performed of pooled proportions. A Generalised Linear Mixed Model with logit transformations produced forest plots, and the Clopper Pearson method was used for 95% confidence intervals. Pooled Odds ratios (OR) were derived using the Mantel-Haenszel method. Heterogeneity was assessed using I^2 statistic. P-values <0.05 were considered significant. Number needed to treat was derived from ORs. An arm-based, Bayesian hierarchical network meta-analysis model of proportions was performed using *getmc* and *rjags* in RStudio.

Results

Literature search found 31 studies. Overall random effects pooled PCF rate was 25% (95% CI 0.21;0.30, I^2=72%, p=<0.01). Incidence after primary closure was 37% (95% CI 0.32;0.43, I^2=60%, p=<0.01) and 19% (95% CI 0.12;0.20, I^2=47%, p=<0.01) after flap closure. Pooled OR was 0.39 (95% CI 0.28;0.55, I^2= 36%, p=0.04) in favour of vascularised tissues. Number needed to treat was 6.5. PCF rate was lower after free (OR 0.62), pedicled (OR 0.36), on-lay (OR 0.38) and patch (OR 0.39) flaps compared to primary closure.

On network meta-analysis, pedicled on-lay reinforcement (OR 0.35) and pedicled patch flaps (OR 0.089) demonstrated significant reductions in PCF compared to primary closure. Free on-lay reinforcement (OR 0.45) and free patch reconstruction (OR 0.42) showed non-significant improvement. On ranking probability test, pedicled patch closure ranked 1st most often (83.2%) with pedicled reinforcement flaps ranking 2nd (42.85%) most frequently, and primary closure consistently ranking last (88.1%).

Conclusion

This updated systematic review with network meta-analysis continues to support the routine use of vascularised pedicled and free flaps in sL using "on-lay" reinforcement and "patch" techniques. Network analyses suggest all

combinations of flap and closure techniques are less likely to develop a post-operative fistula when compared to those undergoing primary closure.

Although the current literature is somewhat hampered by a lack of randomised prospective trials, there is a continuously growing body of large volume prospective and retrospective series that clearly demonstrate the advantages of transferring well-perfused tissues into a previously irradiated and de-vascularised surgical field. Head and neck surgeons should thus strongly consider the use of vascularised flaps to promote wound healing and avoidance of PCF in sL procedures.

Reference (if applicable)

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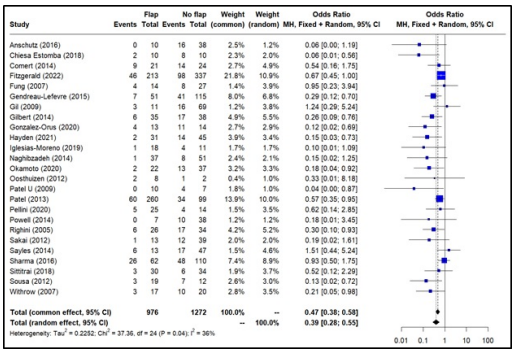

Figure 2.jpg

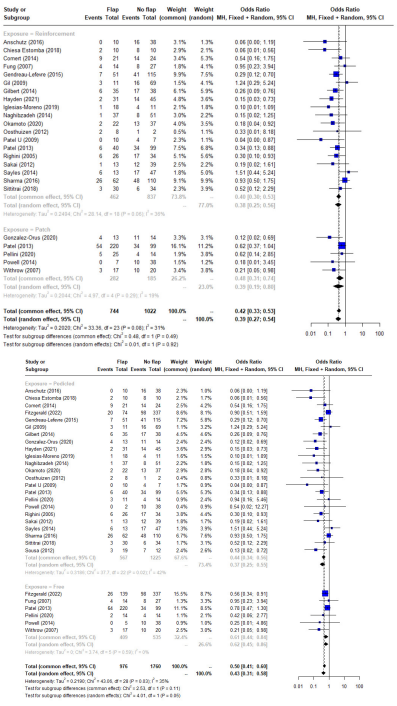

Figure 3.jpg

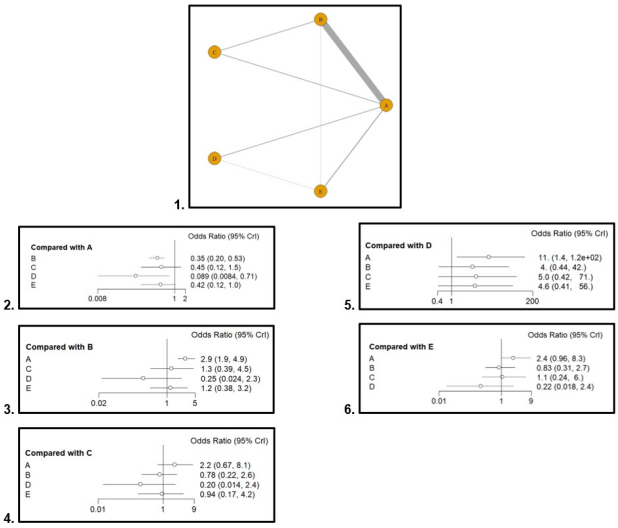
1.
2.
Compared with A
Odds Ratio (95% CrI)
B 0.35 (0.20, 0.53)
C 0.45 (0.12, 1.5)
D 0.089 (0.0084, 0.71)
E 0.42 (0.12, 1.0)
0.008 1 2
3.
Compared with B
Odds Ratio (95% CrI)
A 2.9 (1.9, 4.9)
C 1.3 (0.39, 4.5)
D 0.25 (0.024, 2.3)
E 1.2 (0.38, 3.2)
0.02 1 5
4.
Compared with C
Odds Ratio (95% CrI)
A 2.2 (0.67, 8.1)
B 0.78 (0.22, 2.6)
D 0.20 (0.014, 2.4)
E 0.94 (0.17, 4.2)
0.01 1 9
5.
Compared with D
Odds Ratio (95% CrI)
A 11. (1.4, 1.2e+02)
B 4. (0.44, 42.)
C 5.0 (0.42, 71.)
E 4.6 (0.41, 56.)
0.4 1 200
6.
Compared with E
Odds Ratio (95% CrI)
A 2.4 (0.96, 8.3)
B 0.83 (0.31, 2.7)
C 1.1 (0.24, 6.)
D 0.22 (0.018, 2.4)
0.01 1 9

Figure 4.jpg

Why Neck and Shoulder Dysfunction matters in patients who undergo Head and Neck surgery ?

Poster

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Aim

Surgical incision at the neck and removal of lymph nodes in close proximity to structures critical for functional neck and shoulder movement can result in significant implications for neck and shoulder function. Literature demonstrates that shoulder dysfunction (SD) can manifest as pain, limited range of motion, and reduced strength, significantly impacting the quality of life.

Aim: To describe the pre and post-operative neck and shoulder dysfunction using the neck dissection impairment index (NDII)

Method

Hospital records from 2019 to 2022 were reviewed at a single tertiary HNC centre. The NDII is a patient reported outcome measure assessing neck and shoulder dysfunction and is routinely collected by the physiotherapy team both pre-operatively and on discharge.

Results

200 patients (62.6 ± 12.35 years) were included. The majority of patients underwent SND with 13.5% having an upper limb flap from the shoulder quadrant. NDII scores were available for 138 patients. There was a statistically significant different in pre and post-operative NDII scores (p= 0.05 , 46.1 ± 7.0 vs 33.7 ±11.1). There was a statistically significant difference in scores categorised by age (p= 0.05, <60 mean rank 106.07 vs >60 mean rank 56.5).

Conclusion

Patients present with significant neck and shoulder dysfunction in the acute post-operative phase. More data is needed to assess long term functional recovery and QoL, which is increasingly prevalent in the context of an increasing incidence of HNC.

XRay Vision: a phase 3 study of xevinapant plus intensity-modulated radiotherapy (IMRT) for patients with resected, high-risk, cisplatin-ineligible locally advanced squamous cell carcinoma of the head and neck (LA SCCHN)

Poster

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Aim

In 2020 in the UK, it was estimated that 12,819 people were diagnosed with head and neck cancer and 4,206 died of the disease. The current standard of care for patients with resected LA SCCHN who are at high-risk of disease recurrence and are cisplatin eligible is chemoradiotherapy (CRT; cisplatin + radiotherapy). For patients who cannot receive cisplatin, there is currently no treatment specifically recommended by international guidelines. Xevinapant, a first-in-class, oral IAP (inhibitor of apoptosis protein) inhibitor, is thought to restore cancer cell sensitivity to apoptosis, thereby enhancing the effects of chemotherapy and radiotherapy. In a randomised phase 2 study in patients with unresected LA SCCHN, xevinapant + CRT prolonged 5-year overall survival vs placebo + CRT. In preclinical SCCHN models, xevinapant + radiotherapy also demonstrated antitumor activity. These promising clinical and preclinical data provide a strong rationale for combining xevinapant + radiotherapy in cisplatin-ineligible patients with LA SCCHN.

Method

XRay Vision (NCT05386550) is a randomised, double-blind, phase 3 study comparing xevinapant or placebo + IMRT in patients with resected LA SCCHN who have a high risk of relapse and are ineligible for cisplatin. Eligible patients have histologically confirmed cancer of the oral cavity, oropharynx, hypopharynx, or larynx; undergone surgery with curative intent 4–10 weeks before the start of treatment; high risk of relapse (meeting ≥1 of the following criteria: nodal extracapsular extension or positive resection margins [R1 or close margin ≤1 mm]); no residual disease by CT scan; ECOG PS of 0–2; adequate renal, haematologic and hepatic function; and are ineligible for cisplatin (meeting ≥1 of the following criteria: eGFR <60 mL/min/1.73 m^2; grade ≥2 audiometric hearing loss or grade ≥2 tinnitus; grade ≥2 peripheral neuropathy; and if aged ≥70 years old, unfit according to the G8 questionnaire [score ≤14] or exceeding age limit per national guidelines).

Results

Approximately 700 eligible patients will be randomised to 1:1 to receive 6 cycles of xevinapant (200 mg/day; Days 1–14 of a 3-week cycle) or placebo, in combination with standard fractionation IMRT (66 Gy in 33 fractions, 2 Gy/fraction, 5 days/week) for the first 3 cycles. The primary endpoint is disease-free survival. Secondary endpoints include overall survival, time to subsequent cancer treatments, safety, and health-related quality of life. Patients will be followed up until the last patient has been assessed for 60 months post randomisation or until premature treatment discontinuation.

Conclusion

In conclusion, XRay Vision is an ongoing, randomised, placebo-controlled, phase 3 study evaluating xevinapant + IMRT vs placebo + IMRT in patients with resected LA SCCHN who have a high risk of relapse and are ineligible for cisplatin. Enrolment is ongoing in 25 countries worldwide; 11 sites in the UK are expected to participate,

5 of which are currently active (Clatterbridge Cancer Centre, Liverpool; Mount Vernon Hospital, Northwood; Musgrove Park Hospital, Taunton; St James's Hospital, Leeds; and Torbay Hospital, Torquay). The study started in October 2022, and recruitment is ongoing.

Reference (if applicable)

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‘How Long Do I Have?’ – Examining survival outcomes in laryngeal cancer patients managed with palliative intent in Northern UK: Insights from the Northern Head & Neck Cancer Alliance Retrospective Audit

Poster

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Aim

Laryngeal cancer, marked by its clinical complexity, often confronts clinicians with a challenging question: “How long do I have without radical or aggressive treatment?”

This retrospective study seeks to shed light on survival outcomes for patients undergoing palliative and best supportive care in Northern UK.

Method

Data from 2401 laryngeal cancer patients across six major head and neck centres in Northern UK (Newcastle, Glasgow, Liverpool, Sheffield, Leeds, and Middlesbrough) were retrospectively collected between 2015 and 2021. Of this cohort, 373 individuals (5%) received best supportive/palliative care and were included. The collected data encompassed demographic details, TNM stage and time to mortality or follow up. Kaplan-Meier survival analyses were employed for a comprehensive survival assessment.

Results

The study included 373 patients undergoing palliative care or best supportive care for laryngeal cancer, with a mean age of 72.0 and a male predominance (73%). The median follow-up time was 6 months. Early-stage disease (T1-2) was observed in 17% (n=65), while 83% had late stage disease (T3-4). At the time of data collection, 99% (n=368) of patients had deceased.

The mean survival time was 9.3 months. The estimated 3-month, 6-month, 1-year, and 2-year overall survival rates were 63.3%, 45.7%, 24.8%, and 9.3%, respectively. Disease-specific survival (DSS) rates for the same intervals were 66.6%, 49.3%, 27.1%, and 10.2%, respectively.

For patients with late-stage disease (T3-T4), the estimated DSS rates at 3-month, 6-month, 1-year, and 2-year were 63.8%, 45.5%, 23.8%, and 8.6%.

Conclusion

This study stands as one of the few exploring survival outcomes in laryngeal cancer patients undergoing palliative care or best supportive care. The findings can potentially provide valuable insights for informing patients about survival in the absence of radical treatment, facilitating important decision-making conversations. The results are anticipated to be beneficial for both clinicians and patients alike.

This work underscores the significance of the Northern Head & Neck Cancer Alliance, a collaborative research network (established in 2022) within the northern region of the UK.

This alliance of nine high-throughput head and neck cancer centres strives to set a pioneering standard for

impactful research collaboration across Northern UK.

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