



Canadian Society of Otolaryngology-Head and Neck Surgery

**74th ANNUAL MEETING (Virtual)
September 26 – November 14, 2020**

“Quality and Excellence in Otolaryngology-Head and Neck Surgery”

Saturday, October 3, 2020 @ 11:55 a.m. – HEAD AND NECK 1 PAPERS Moderator: Dr. Anthony Nichols

11:55 p.m. - 12:00 p.m. ***Adherence to Quality Indicators in the Surgical Management of Head and Neck Melanoma - E. Grose, H. Li, C. Goulet, N. Lebo, C. Nessim, S Johnson-Obaseki, Ottawa, ON***

Learning Objectives

1) To become familiar with quality indicators in the surgical management of head and neck melanoma 2) To describe our institution's adherence to quality indicators in the surgical management of head and neck melanoma and identify areas of improvement

Abstract

Background: Standardization of the clinical management of head and neck melanoma through development of quality indicators seeks to improve the quality of care and patient outcomes. However, variability in the surgical treatment of melanoma and deviation from the guidelines is well documented. The objective of this study is to determine the adherence to quality indicators in the surgical treatment of head and neck melanoma. **Methods:** This retrospective study included patients who underwent surgical treatment for head and neck melanoma between 2015-2019 at the central intake center for patients with melanoma in our region. Seven quality indicators were selected for analysis. **Results:** Eighty patients (75% male, mean age: 70 ±14.6 years) who underwent surgical treatment of head and neck melanoma were included. Sentinel lymph node biopsy (SLNB) was performed in 98% of cases when indicated. Ninety five percent of patients with biopsy proven nodal metastases underwent lymph node dissections (LNDs) when indicated. Complete adherence was observed with the following quality indicators: performing fine needle aspiration biopsies for clinically palpable lymph nodes, undergoing lymphoscintigraphy prior to SLNB, removing adequate number of lymph nodes in LNDs, and documenting a discussion regarding adjuvant therapy for patients with metastases. Ten percent of wide local excision procedures did not have the margins used documented in the operating report. **Conclusion:** This study represents the first assessment of quality indicators specific to the treatment of patients with head and neck melanoma. In our region, there are high levels of adherence to most of the quality indicators assessed.

12:00 p.m. - 12:05 p.m. ***Elective Neck Dissection versus PET/CT Guided Therapy of the Clinically N0 Neck Dissection: A Cost-Utility Analysis - D. Forner, Halifax, NS, J.R. de Almeda, Toronto, ON***

Learning Objectives

1. Following this presentation, participants will be familiar with test parameters of positron-emission tomography/computed tomography (PET/CT) in the setting of regional metastasis evaluation in early oral cavity cancer, including sensitivity, specificity, and negative predictive value. 2. Following this presentation, participants will be able to apply the strengths and weaknesses of currently available evidence for and against the use of routine PET/CT in decision making for elective neck dissection in early oral cavity cancer. 3. Following this presentation, participants will be able to understand the economic evaluation findings for PET/CT versus elective neck dissection in early oral cavity cancer.

Abstract

Introduction: In early oral cavity cancer, elective neck dissection (END) for the clinically node negative (cN0) neck has been advocated for in cases where the occult nodal rate is projected to be greater than 20%. This paradigm has been recently questioned, however, following the publication of ACRIN 6685, a prospective trial that demonstrated a high negative predictive value of PET/CT in the cN0 neck. The cost effectiveness of the routine adoption of PET/CT to guide elective neck dissection (END) is currently unknown. To inform this debate, we performed an economic evaluation comparing PET/CT guided therapy to routine END in the cN0 neck. **Methods:** In this cost-utility analysis, a decision tree was constructed to model the PET/CT and END strategies from a healthcare payer perspective. A Markov model over a lifetime horizon simulated treatment, disease recurrence and survival. Model parameters were derived from a comprehensive literature review.

Deterministic and probabilistic sensitivity analyses were performed. **Results:** The elective neck dissection strategy was dominate in the base case with a cost-savings of \$917USD and an increase of 0.05 QALYs. END was sensitive to variation in occult nodal disease, cost, utilities and complications in both deterministic and probabilistic sensitivity analysis. In a two-way sensitivity analysis, increasing occult nodal disease and increasing negative predictive value of PET/CT caused the END strategy to become decreasingly cost-effective. **Conclusion:** Our study found that END offers reduced costs and provides improved health outcomes compared to PET/CT. Publication of ROC statistics for PET/CT is critical to inform future economic models.

12:05 p.m. – 12:10 p.m.

Transoral Laser Microsurgery vs Primary Organ Preservation for Early Laryngeal Cancer: A Comparative Analysis - N. Fnais, S. Zahabi, D. Chan, H. Zhang, R. Agnihotram, M. Hier, K. Sultanem, N. Sadegi, Montreal, QC

Abstract

Background: There is a lack of consensus regarding the management of early stage glottic cancer. While surgical treatment and radiation therapy are both effective, the progression free survival and the eventual laryngeal preservation rate may differ. We evaluated the outcomes of transoral laser microsurgery (TLM) vs radiotherapy (XRT) for stage I and II glottic squamous cell carcinoma (SCC). **Methods:** Retrospective analysis of patients with T1 or T2, N0, glottic SCC at McGill University Health Centre, the Jewish General Hospital, and the George Washington University from 1993 to 2018 was performed. Outcomes in patients treated with TLM alone (n = 74) and XRT (n = 151) were compared. Univariate Kaplan-Meier survival analyses were conducted. **Results:** The 5-year overall survival (OS) was 98.65% for TLM and 96.69% for XRT. TLM group had a better recurrence free survival compared to XRT (91.8 vs 80.13 respectively, hazard ratio [HR], 0.406; 95% confidence interval [CI], 0.169-0.975, p = 0.037). TLM had similar laryngectomy-free survival compared to XRT (HR, 0.453; 95% CI, 0.153-1.339). **Conclusions:** TLM was associated with better recurrence free survival compared to XRT. There was a trend towards better laryngectomy-free survival with TLM that did not reach statistical significance.

12:10 p.m. – 12:15 p.m.

Discussion

12:15 p.m. - 12:20 p.m.

Parotidectomy with Combined Sternocleidomastoid Flap Reconstruction: A Novel Technique with Improved Outcomes - K. Munroe, J. Melong, J. Trities, M. Rigby, M. Corsten, S.M. Taylor, Halifax, NS

Learning Objectives

1) Discuss the impact of surgical drains on length of hospital stay and postoperative complications following superficial parotidectomy for benign disease. 2) Introduce the novel technique of a drain free parotidectomy by incorporating the use of a sternocleidomastoid flap (SCM) and a facelift dressing to reduce postoperative hospital stay and complications. 3) Review the efficacy and safety of our novel technique compared to current treatment strategies.

Abstract

Introduction: For patients undergoing superficial parotidectomy, reconstruction with a sternocleidomastoid flap remains controversial as it frequently results in an increased length of hospital stay due to the use of surgical drains. Strategies that avoid drain insertion may allow for shorter hospital stays while reducing postoperative complications, thus helping to reduce overall healthcare costs. **Objective:** To evaluate a novel surgical technique of a drain free parotidectomy by incorporating the use of a sternocleidomastoid (SCM) flap and a facelift dressing to reduce postoperative hospital stay and complications. **Methods:** Patients with benign parotid disease undergoing a superficial parotidectomy by the senior author at our center between July 2010-2019 were identified within a prospective cohort database. Primary outcomes included length of hospital stay and postoperative complications following superficial parotidectomy. **Results:** Sixty patients underwent a superficial parotidectomy reconstructed with a superiorly based SCM flap and a facelift dressing applied postoperatively to avoid drain insertion. The average length of hospital stay following surgery was 1.02 days. Two patients (3.3%) developed a postoperative sialocele requiring drainage. One patient (1.7%) developed a hematoma on extubation requiring hematoma evacuation. No patients developed subjective Frey's Syndrome. Twelve patients (20%) developed temporary facial paresis. Three patients (5%) developed mild postoperative wound infections. **Conclusion:** Superficial parotidectomy for benign disease can be managed safely with use of an SCM flap without the use of a drain. This approach could significantly reduce the length of postoperative hospital stay while minimizing postoperative complications, helping to reduce overall healthcare costs and improve patient outcomes.

12:20 p.m. - 12:25 p.m.

Swallowing Outcome Following Transoral Approach for Early-stage Oropharyngeal Cancer (OPC): Systematic Review - M. Rammal, S. Ashram, A. Nichols, D. MacNeil, London, ON

Learning Objectives

Systematically review to literature to determine the effect of transoral surgery for (early T stage OPC) on swallowing.

Abstract

Title: Swallowing outcome following Transoral approach for early-stage Oropharyngeal Cancer (OPC): Systematic review. **Introduction:** Treatment options for small (T1-T2) oropharyngeal cancer (OPC) treatment include transoral oral surgery (TOS) or chemoradiation. However, comparison of the swallowing outcomes has been the area of controversy among both approaches. Published systematic reviews examining swallowing outcomes include patients with advanced T stage OPC, making generalizability difficult. The objective of this study was to systematically review to literature to determine the effect of transoral surgery for (early T stage OPC) on swallowing. **Method:** MEDLINE, Embase, Cochrane, Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, ClinicalTrials.gov, CINAHL, and Scopus, were searched from 1946 to September 2019. PRISMA guidelines were followed to abstract the data. Two reviewers independently reviewed the studies. Randomized clinical trials or observational studies of at least ten patients with T1/T2 OPC who underwent transoral resection that reported at least 12 months swallowing functional outcome were included. Patient and tumour characteristics, methods of swallowing assessment and gastrostomy dependency rate were recorded. **Result:** Of the 1375 titles reviewed, 39 articles met the inclusion criteria. Thirty-nine observational study and two randomized clinical trials, representing a total of 2,857 patients, were included in the analysis. Eleven different functional outcome measurement tools were used. The MDADI score was the most widely used; reported by three articles. The MDADI global score mean was 79.3-80.2, and the MDADI functional score mean was 76.1-86.5. Fifteen articles reported the rate of gastrostomy tube dependence, ranging from 0-39.1% at 12 months. **Conclusion:** Transoral surgery results in acceptable swallowing outcomes. Future research should focus on reporting of swallowing outcomes with standard tools and timelines.

12:25 p.m. - 12:30 p.m.

Management Patterns for Positive Sentinel Lymph Node in Head and Neck Melanoma - D. Goldstein, I. Berania, Toronto, ON, G. McKinnon, A. McKay, Winnipeg, MB, A. Easson, M. Butler, D. Hogg, Toronto, ON

Learning Objectives

1. Review the latest recommendation regarding completion lymphadenectomy for positive sentinel lymph node biopsy in cutaneous melanomas
2. Evaluate practice differences among surgeons in the management of positive sentinel lymph nodes for head and neck melanomas.
3. Understand the potential variations among patients and tumors which may influence decision making for the management of positive sentinel lymph node biopsy.

Abstract

Purpose: A North American web-based survey was conducted among melanoma surgeons to investigate preferences for completion lymph node dissection (CLND) in head and neck melanomas with positive sentinel lymph nodes (SLN). **Methods:** A questionnaire was designed to evaluate practice settings of surgeons and included clinical scenarios which assessed management preferences based on tumor characteristics. Surgeons were identified through the Canadian Society of Otolaryngology - Head & Neck Surgery (CSO), the Canadian Society of Surgical Oncology (CSSO) and the American Society of Head & Neck Surgery (AHNS). **Results:** Preliminary results (Ongoing recruitment) includes responses from 29 melanoma surgeons. 28/29 (96.6%) of surgeons practiced in Canada. 20/29 (68.9%) respondents were surgical oncologists, and 12/29 (41.3%) were Otolaryngology-Head & Neck Surgeons. Among all respondents, 19/29 (65.5%) treated head and neck melanoma. The majority of surgeons 25/29 (86.2%) practiced in an academic setting. In patients with a single positive SLNB (1/1), 13/19 (68.4 %) surgeons recommended not to perform CLND; recommendation to perform CLDN appeared only influenced by an increased number of positive SLN (3/3) among 14/20 (70%) surgeons. An increased depth of invasion (DOI), increased number of detected SLN or the presence nodal deposits > 2mm, did not influence surgeons to perform CLND, in 65%, 75% and 65%, respectively. **Conclusions:** The majority of melanoma surgeons did not recommend performing CLND for positive SLN in melanomas of the head and neck. More evidence is needed to standardize the role CLND in consideration of tumor variations and patient characteristics.

12:30 p.m. - 12:35 p.m.

Discussion

12:35 p.m. - 12:40 p.m.

Post-operative Hematomas in Free-flap Head and Neck Reconstructive Surgery: Retrospective Chart Review and Literature Review - M. Grzybowski, N. Cohen, Kingston, ON

Learning Objectives

1. Following this presentation the audience will have a knowledge of how intra-operative and post-operative blood pressure affects the development of post-operative hematomas in free-flap head and neck reconstruction patients.
2. Following this presentation the audience will be able to consider which patients will be at an increased risk of developing a hematoma.

Abstract

Background: Post-operative hematomas are a life-threatening complication that occur at a rate of 5-18% following free tissue head and neck reconstructive surgery (FFHNS). Many hemodynamic changes occur during FFHNS and there is evidence that intra- and post-operative hypertension may play a role in the development of hematomas. In this study we explored the relationship between blood pressure and vasopressor use with the development of hematomas following FFHNS. **Methods:** A retrospective chart review of all FFHNS from August 2018 to February 2019 was completed and details were analyzed with an unpaired t-test, chi-squared test and logistic regression. The literature surrounding the development of hematomas and use of vasopressors in FFHNS was also reviewed. **Results:** There were thirteen FFHNS's over this time, six developed a hematoma. The most common resection and harvest site were the oral cavity and radial free arm. Every patient received a vasopressor intraoperatively, the most common of which was both phenylephrine and ephedrine (n=6). There was no significant difference between the groups in the number of patients that had hypertension or were on a blood pressure medication (p=0.39, p=0.31). There were no mortalities and five of the six patients who developed a hematoma returned to the OR for evacuation. **Conclusion:** Based on preliminary results there were no significant differences in the blood pressure or vasopressor use between patients that developed a hematoma and those that did not. Post-operative hematomas are an important complication to recognize and treat early on as they can lead to severe morbidity and mortality.

12:40 p.m. - 12:45 p.m.

Assessing Post-Operative Patient-Centred Education Administration in Head and Neck Cancer Patients A Pilot Study - E. Prisman, E. Wang, H. Chotwani, Vancouver, BC

Learning Objectives

By the end of this presentation, the clinician/resident will be able to: 1. Describe the benefits of patient-centered education in post-operative head and neck cancer patients. 2. Consider the impact of patients' self-involvement on overall satisfaction and perceived quality of medical care.

Abstract

Background: Head and neck cancer is a disease that has a particular propensity for treatment-related morbidity. It is hypothesized that patients who are more involved in their care in hospital and who are actively provided with more treatment-related information may experience improvements in their overall satisfaction. **Objectives:** To determine whether patients' self-involvement and the delivery of patient-centred education via electronic tablet modules has an impact on overall satisfaction and perceived quality of medical care. **Methods:** Patients undergoing reconstructive head and neck surgeries for a confirmed oral or oropharyngeal cancer diagnosis were recruited. They were randomized to receive scheduled education through electronic surveys during their post-operative admission as opposed to no education. A Likert-type survey was collected on discharge day to assess patient-centered outcomes. The Pearson Chi-Square test was utilized for statistical analysis. **Results:** Twenty-five patients were recruited into the study (N = 14 Education; N = 11 Non-Education). In the education group, 93% of patients found the educational platforms extremely useful or quite useful. 80% of this cohort would recommend the educational platform for patients undergoing similar procedures. 93% of patients were extremely satisfied with the surgeon and medical team in the education group vs. 82% in the non-education group. 45% of patients in the non-education group would have liked additional education during their post-operative admission. **Conclusions:** Head and neck cancer patients perceived satisfaction may enhance with the utilization of patient-centred post-operative educational platform. Further prospective studies are warranted to assess the significance of this.

12:45 p.m. - 12:50 p.m.

Patient-specific Maxilla Reconstruction: A Novel in House Virtual Surgical Planning - S. Nguyen, L. Tran, E. Wang, H. Britton, E. Prisman, Vancouver, BC

Learning Objectives

To determine the utility of Virtual Surgical Planning to compute mathematically optimal maxillary reconstruction plans.

Abstract

Introduction: Reconstructing maxillary defects optimally is challenging even for experienced microvascular surgeons. Virtual surgical planning (VSP) can assist in planning optimal reconstruction. The aim of this study is to report the utility of an in house VSP based on a semi-automated mathematical optimization algorithm for maxillary reconstruction. **Method:** Maxillary defects were created and applied to the VSP to compute an automated optimal virtual reconstruction using patient-specific fibula. Pre- and post-reconstruction cephalometrics were measured. **Results:** Nine Brown classification defects were created in a single patient. The average pre- and post-reconstruction difference for maxilla width was 7.07 mm (range -5.66, +9.70), premaxilla width 4.71 mm (-4.7, +5.16), malar height 2.42 mm (-11.81, +3.63) and maxilla height 3.08 mm (-8.14, +9.01). The average number of bone segments was 2.78 (range 2-4). Average pedicle length was 10.24 cm, but only 0.93 cm for a bilateral total

maxillectomy with zygomatic resection which required a four-segment reconstruction. The average fibula height average was 17.47 mm (13.47-19.53). **Discussion:** This novel in house VSP, based on a mathematical optimization algorithm, can automatically and accurately virtually reconstruct the complex shape of the midface. This tool may be applied to guide the surgeon in choosing an appropriate free flap, predict pedicle length and dental implantability and create a customized surgical cutting guide.

12:50 p.m. - 12:55 p.m.

Genomic Disparities in Head and Neck Squamous Cell Carcinomas in Patients of Different Racio-Ethnic Backgrounds – H.A. Kim, M. Shaikh, F. Ghasemi, N. Mundi, E. Di Gravio, J.W. Barrett, A. Nichols, London, ON

Learning Objectives

By the end of this presentation, meeting participants will be able to observe that significant mutational differences exist between head and neck squamous cell carcinomas in different racio-ethnic groups.

Abstract

Background: Numerous studies have demonstrated poorer outcomes by race/ethnicity in squamous cell carcinoma. Some studies have identified differences in socioeconomic status and access to care as important factors affecting outcomes, however differences in the genomic composition of tumours from patients of different races/ethnicities have yet to be explored. **Methods:** We downloaded the clinical information, single nucleotide variation (SNV) and copy number aberration (CNA) data from The Cancer Genome Atlas (TCGA) head and neck cancer cohort. Cases positive for human papillomavirus (HPV) occurred almost exclusively among white/Caucasian patients (68/71) and thus they were excluded. We stratified the HPV-negative patient cohort into a combined racio-ethnic groups (REG) as follows: White/Non-Hispanic (White), Hispanic/Latino (Hispanic), Black/African American (Black), Asian, American Indian /Non-Hispanic (Indigenous American). **Results:** The HPV-negative cohort contained 354 White, 43 Black, 22 Hispanic and 11 Asian and 1 Indigenous American patient. Black patients had a poorer prognosis than White patients on multivariate analysis ($p < 0.05$). There were no significant SNV differences between any of the REGs after false discovery rate (FDR) correction, however there were a large number of CNA differences between Black and White patients (2294 deletions, 96 amplifications, $FDR < 0.1$). Loss of the 3p chromosome arm was markedly more frequent in tumours from Black patients ($p < 0.01$) but was not associated with poorer prognosis. **Conclusion:** Significant genomic differences were identified between tumours from Black and White patients including loss of the 3p chromosome arm. These differences in biology may partially account for differences in survival seen between REGs.

12:55 p.m. - 01:00 p.m.

Discussion

Thursday, October 15, 2020 @ 9:05 p.m. – HEAD AND NECK 2 PAPERS

Moderators: Dr. David Côté & Dr. Shamir Chandarana

09:05 p.m. – 09:10 p.m.

Development of a Patient Decision Aid for Indeterminate Thyroid Nodule Management – E. Aleska, A. Nickols, K. Fung, J. Yoo, D. Morrison, A. Sawka, S. Hamilton, M. Rammal, A. Dzioba, D. MacNeil, London, ON

Learning Objectives

1. Consider the importance of reducing decisional conflict and improving patient knowledge when making health decisions. 2. Gain an understanding of the factors patients consider when making an indeterminate thyroid nodule management decision. 3. Consider the framework of the International Patient Decision Aid Standards in developing a Patient Decision Aid while limiting bias and ensuring feasibility.

Abstract

Background: Options for management of indeterminate thyroid nodules include active observation; molecular testing; or diagnostic surgery. This decision requires understanding nodule categorization and risk stratification by cytology, sonography, and/or molecular testing, while recognizing that uncertainty exists regarding recommended treatments and incorporating personal values. Research has shown that many patients experience clinically significant decisional conflict when deciding management for indeterminate nodules. Patient Decision Aids (P-DA), have previously been

shown to decrease decisional conflict and increase patient medical knowledge when used for health decisions. The objective of this study is to develop a P-DA for indeterminate thyroid nodule management. **Methods:** We followed the International P-DA Standards Guidelines and developed a draft P-DA for patients with indeterminate thyroid nodules. A steering committee consisting of Endocrinologists and Otolaryngologists was assembled to evaluate and revise the P-DA. Alpha testing in medical expert and patient focus groups was completed to evaluate comprehensibility and feasibility. Following alpha testing the P-DA was reviewed by the steering committee. **Results:** A draft P-DA for patients with indeterminate thyroid nodules has been completed following input from the steering committee and results of alpha testing. Positive and constructive feedback was provided resulting in a document ready for clinical application. **Conclusions:** Results of alpha testing have provided a comprehensive, concise P-DA for indeterminate thyroid nodules. We are currently in the process of beta testing, which will be followed by a pilot randomized control trial comparing patient knowledge and decisional conflict in those receiving the P-DA versus those who do not.

09:10 p.m. – 09:15 p.m.

3p Arm Loss Predicts Poor Survival in HPV-negative Head and Neck Squamous Cell Cancer – K. Hugh, M. Shaikh, F. Ghasemi, N. Mundi, E. Di Gravio, J.W. Barrett, A. Nichols, London, ON

Learning Objectives

By the end of this presentation, meeting participants will be able to interpret deletion of the 3p arm as a prognostic marker in HPV-negative head and neck squamous cell carcinoma.

Abstracts

Background: Loss of the 3p chromosome arm has previously been reported to be a biomarker of poorer outcome in both human papillomavirus (HPV)-positive and negative cancer. However, the precise definition of 3p arm loss is unclear and its prognostic importance has not been evaluated in the entire Cancer Genome Atlas (TCGA) cohort. **Methods:** We downloaded the clinical information and single nucleotide variation (SNV) and copy number aberration (CNA) data from the TCGA head and neck cancer cohort. We assessed the frequency of loci deletions across the 3p arm separately in HPV-positive and negative disease and correlated our findings with survival and loss of the 3p14.2 fragile site locus. **Results:** We found that 3p arm loss was almost exclusively an all or none event in the HPV-negative cohort; patients either had <1% or >97% of the arm lost. Loss of >97% of the 3p arm (3PAL) was strongly associated with the loss of the 3p14.2 fragile site locus containing the FHIT gene ($p < 10^{-15}$). 3PAL was associated with poorer overall survival on multivariate analysis ($p < 0.05$). 3PAL tumours were enriched for mutations in TP53, and depleted for mutations in CASP8, HRAS, HUWE1, and HLA-A after accounting for false discovery rate (FDR) correction ($FDR < 0.05$). 3PAL was markedly more frequent in male patients ($p < 0.001$). **Conclusion:** 3p arm loss is largely all or none phenomenon in HPV-negative disease and is associated with poorer survival in the TCGA cohort. It may represent a clinically useful biomarker to guide treatment decisions for HPV-negative patients.

09:15 p.m. – 09:20 p.m.

A Comparison of Computer-assisted Mandibular Plating to Conventional Plating: A Single-blinded Randomized Controlled Pilot Study – J. Davies, H. Chan, J. de Almeida, D. Goldstein, R. Gilbert, J. Irish, Toronto, ON

Learning Objectives

1. Compare computer-assisted mandibular plating to conventional plating. 2. Describe situations where 3D models may be advantageous in mandibular reconstruction. 3. Identify quantitative metrics for evaluating mandibular reconstruction.

Abstracts

BACKGROUND: Previous studies suggest that using 3-dimensional (3D) models may decrease operative time and improve the accuracy of mandibular reconstruction. However, no study has evaluated this in a randomized controlled study. **OBJECTIVE:** The purpose of this study was to compare computer-assisted mandibular plating using 3D models to conventional plating. **METHODS:** Patients scheduled to undergo mandibular reconstruction between December 2017 and June 2019 were randomly assigned to plate bending with a 3D model or intraoperative freehand bending. Preoperative/postoperative CT scans of the head/neck were obtained to generate computer models of the reconstruction. The plate surface contact area, mean plate-to-bone distance and position of the condylar head between CT scans was calculated. Demographic data, surgical details and complications were recorded. **RESULTS:** Twenty patients met inclusion criteria, with a mean age of 58 (standard deviation [SD] 14), and of whom 15 (75%) were male. The mean follow-up time was 9.8 months (range=1.6 to 22.3). Reconstruction was performed with fibular (25%) and scapular free flaps (75%). Multivariate analysis demonstrated the percentage of surface contact between the reconstructive plate and mandible was improved with 3D models compared to freehand bending ($94 \pm 2\%$ vs. $78 \pm 6\%$, $p = 0.04$, respectively). There was a trend towards improved overall plate-to-bone distance (3D model: $0.7 \pm 0.31\text{mm}$ vs. no model: $1.3 \pm 0.7\text{mm}$, $p = 0.06$). Intraoperative time was non-significantly decreased with the use of a model (3D model: $726 \pm 84\text{mins}$ vs. no model: $757 \pm 84\text{mins}$, $p = 0.4$). There were no differences in condylar head position or complications. **CONCLUSION:** Computer-assisted mandibular plating can be used to improve the accuracy of plate contouring.

09:20 p.m. – 09:25 p.m.

Discussion

09:25 p.m. – 09:30 p.m.

Clinical Trials in Transoral Surgery for Oropharyngeal Cancer – M. Rammal, A. Nichols, London, ON

Learning Objectives

1. Familiarize the audience with all available and active clinical trials involving the transoral approach in the treatment of OPC. 2. Review the result of all completed clinical trials in transoral surgery for OPC.

Abstract

Title: Clinical Trials in Transoral Surgery for Oropharyngeal Cancer. **Introduction:** In the last decade, the transoral approach has become a cornerstone in the treatment of HPV related OPC. Since then, many clinical trials have been developed to compare this approach to (chemo)radiation. In this article, we reviewed and summarized all active and completed clinical trials which involve the transoral surgical approach in the treatment of OPC. **Methods:** The database of clinicaltrials.gov was reviewed for transoral surgery for oropharyngeal cancer, including active, active, but not recruiting and completed trials. **Result:** A total of 20 studies found. A comprehensive review of each trial is provided, including the status of the trials, inclusion criteria, outcome measures and anticipated completion date. Five completed studies; three have results. Eleven ongoing clinical trials, including ORATOR-II, Best Of, OPTIMA-II, PATHOS, QoLATI and TORS De-Intensification Protocol Version 2.0: Dose and Volume Reduction in the Neck. Four active but not recruiting clinical trials including ORATOR-I, ECOG E3311 and Induction Chemotherapy Followed by Surgery for Locally Advanced Head and Neck Cancer. **Conclusion:** This comprehensive review sheds light on all actively recruiting clinical trials that involve the transoral approach for the treatment of OPC. Interestingly, most of the primary outcomes of those trials are designed to compare the functional outcome between the transoral surgery and radiation approaches. We expect this article to resolve some of the confusion when consider recruiting HPV related OPC to one of those trials.

09:30 p.m. – 09:35 p.m.

Oral Cavity Cancer Diagnostic Route and Survival: A Population-based Study – Z. Mir, R. Bentley, M. Mavor, T. Phillips, P. Groome, Kingston, ON

Abstract

Oral cavity cancer (OCC) is a significant global health concern, but research examining the effects of diagnostic route on outcomes for OCC is lacking. This study examined associations between different diagnostic routes and long-term outcomes using routinely collected healthcare data. A population-based retrospective cohort study was conducted using patients diagnosed with OCC in Ontario, Canada from 1991-2000. We examined associations between 3 diagnostic routes (dental vs. primary care provider [PCP] vs. other healthcare provider [OHCP]) and stage of disease at diagnosis. Additionally, we compared 5-year cancer specific survival (CSS) between these groups. The final cohort comprised 1800 patients, of which 1172 (65.1%) were men. The majority of patients from each diagnostic route had access to a PCP (range 85-99%) and 65.2% of patients were diagnosed via PCP. Patients diagnosed via dental route had a significantly higher proportion of floor of mouth cancers (53.8% dental vs. 36.6% PCP vs. 34.2% OHCP, $p < 0.001$). The latter two routes had higher odds of advanced stage at diagnosis: ORPCP=1.21 (0.95-1.54) OROHCP=1.52 (1.01-2.28). Stratifying for disease stage, we noted survival differences between diagnostic routes; the most pronounced was a significantly lower 5-year CSS for patients with stage IV disease diagnosed by OHCP (41.1% dental vs. 40.4% PCP vs. 27.1% OHCP, $p < 0.001$). To summarize, patients diagnosed with OCC via dental route appeared to have increased detection of inconspicuous lesions from deeper anatomic subsites, and better long-term survival for advanced disease. This underscores the role of primary care professionals in the detection of oral cavity lesions among at-risk patients.

09:35 p.m. – 09:40 p.m.

Discussion

09:40 p.m. – 09:45 p.m.

Outpatient versus Inpatient Superficial Parotidectomy: Evaluating Clinical and Pathological Characteristics – J. Freeman, D. Lee, D. Forner, C. End, C. Yao, S. Samargandy, E. Monteiro, I. Witterick, Toronto, ON

Learning Objectives

1) By the end of this presentation participants will be able to describe the similarities and differences in possible patient selection factors between outpatient and inpatient superficial parotidectomy. 2) By the end of this presentation participants will be able to compare outcome measures between inpatient and outpatient superficial parotidectomy. 3) By the end of this presentation participants will be able to evaluate the safety of performing superficial parotidectomy as an outpatient procedure.

Abstract

Background: Recent studies have shown initial evidence for performing superficial parotidectomy as an outpatient procedure. The aim of this study is to assess the safety and selection criteria predictors between outpatient and inpatient superficial parotidectomy. **Methods:** A retrospective cohort study of individuals who underwent superficial parotidectomy between 2006 and 2016 at a tertiary care center was conducted. Primary outcomes measured were postoperative surgical and medical complications. Secondary outcomes included unplanned emergency room visits and readmissions within 30 days of operation due to postoperative complications. **Results:** Of the 238 patients included in the study, 124 underwent outpatient superficial parotidectomy and 114 underwent inpatient superficial parotidectomy. There were no significant differences identified between the groups in terms of patient demographics, comorbidities, or tumour characteristics. Patients undergoing outpatient superficial parotidectomy lived a shorter distance from the hospital (116 Km in inpatient vs. 27 Km in outpatient [95% CI, -1 to 162 km], $p = 0.053$). There was no difference in the rate of return to the emergency department (3.5% vs 5.6%, $p = 0.433$) or readmission within 30 days (0.9% vs 0.8%, $p = 0.952$). Additionally, complication rates were not significantly different between the groups (24.2% in outpatient group vs. 21.1% in inpatient, $p = 0.56$). **Conclusion:** Superficial parotidectomy can be done safely on an outpatient basis without the need for inpatient monitoring. The complication rates are comparable between outpatient and inpatient parotidectomy.

09:45 p.m. – 09:50 p.m.

Patient-specific Maxilla Reconstruction: A Novel in House Virtual Surgical Planning – S. Nguyen, L. Tran, E. Wang, H. Britton, E. Prisman, Vancouver, BC

Learning Objectives

To determine the utility of Virtual Surgical Planning to compute mathematically optimal maxillary reconstruction plans.

Abstract

Introduction: Reconstructing maxillary defects optimally is challenging even for experienced microvascular surgeons. Virtual surgical planning (VSP) can assist in planning optimal reconstruction. The aim of this study is to report the utility of an in house VSP based on a semi-automated mathematical optimization algorithm for maxillary reconstruction. **Method:** Maxillary defects were created and applied to the VSP to compute an automated optimal virtual reconstruction using patient-specific fibula. Pre- and post-reconstruction cephalometrics were measured. **Results:** Nine Brown classification defects were created in a single patient. The average pre- and post-reconstruction difference for maxilla width was 7.07 mm (range -5.66, +9.70), premaxilla width 4.71 mm (-4.7, +5.16), malar height 2.42 mm (-11.81, +3.63) and maxilla height 3.08 mm (-8.14, +9.01). The average number of bone segments was 2.78 (range 2-4). Average pedicle length was 10.24 cm, but only 0.93 cm for a bilateral total maxillectomy with zygomatic resection which required a four-segment reconstruction. The average fibula height average was 17.47 mm (13.47-19.53). **Discussion:** This novel in house VSP, based on a mathematical optimization algorithm, can automatically and accurately virtually reconstruct the complex shape of the midface. This tool may be applied to guide the surgeon in choosing an appropriate free flap, predict pedicle length and dental implantability and create a customized surgical cutting guide.

09:50 p.m. – 09:55 p.m.

Discussion

Tuesday November 10, 2020 @ 9:05 p.m. - Head and Neck 3 Papers

Moderators: Dr. John de Almeida & Dr. Han Zhang

09:05 p.m. - 09:10 p.m.

Retrospective Analysis: How Well Does TIRADS and Bethesda's Score Predict Well Differentiated Thyroid Malignancy? - P. Pace-Asciak, D. Kramer, Kamloops, BC

Learning Objectives

1. To review the literature regarding the utility of combining sonographic features (TIRADS) and FNA biopsy (Bethesda) for screening thyroid nodules for potential malignancy. 2. To retrospectively review the accuracy in one institution of combining TIRADS and Bethesda features for screening thyroid nodules for well differentiated thyroid cancer.

Abstract

ACR-TIRADS is used by radiologists to screen thyroid nodules sonographically for the potential risk for harbouring malignancy. When an FNA biopsy of a suspicious thyroid nodule results in Bethesda 4 (follicular neoplasm), surgery is required to determine whether it is a benign follicular adenoma versus a malignant follicular neoplasm since vascular invasion can not be delineated from FNA. Retrospectively, we reviewed over 60 patients that had either undergone a Hemithyroidectomy (HT) or Total Thyroidectomy (TT) to rule out potential malignancy. Specifically, we examined the accuracy of predicting thyroid malignancy by comparing the initial TIRADS score as well as the Bethesda score assigned to the FNA of the nodule against the final surgical pathology result. The female to male ratio was 2:1 and the average age of the patient was approximately 57. The most common FNA result in our centre was Bethesda 4 (follicular neoplasm) whereby the surgical pathology results revealed benign features (33.3%) compared with malignant features (16%). Correlation with the TIRADS score is in progress, and preliminary data demonstrates variability among TIRADS 3,4,5. A small percentage of thyroid malignancies were seen in nodules graded TIRADS 3. Similarly, a small percentage of nodules with benign surgical pathology (often Hashimoto's thyroiditis) were initially graded as highly suspicious (TIRADS 5). Variability in TIRADS reporting may be attributed to a newer radiological approach in our institution for screening thyroid nodules. Future research is needed to help better define follicular neoplasm both radiologically and on FNA biopsy to avoid unnecessary thyroid surgery.

09:10 p.m. - 09:15 p.m.

Associate Between Bethesda Classification and Molecular Mutations in Thyroid Nodules - M. Peeva, M. Mascarella, V.-I. Forest, M. Hier, Montreal, QC, G. Pusztaszeri, M.G. Avior, Israel, R. Payne, Montreal, QC

Learning Objectives N/A

Abstract

Background: Fine needle aspiration cytology is the standard diagnostic method for thyroid nodules detected on ultrasound that warrant biopsy. Molecular testing is an adjunct to biopsy. The mutations that are uncovered, such as BRAF V600E and RAS-type mutations, can assist with uncovering the nature of the nodule (benign versus malignant) as well as whether the tumor is an aggressive malignancy. The aim of this study was to ascertain whether the Bethesda score of the thyroid nodule had any correlation with the molecular mutation that was detected. **Methods:** A retrospective chart review of patients with a thyroid nodule who underwent FNA, molecular testing and thyroidectomy was performed at a McGill University teaching hospital. Associations between Bethesda classification and presence of molecular mutations on FNA were compared with final pathology results. **Results:** 550 patients were included in the study. The frequency distribution of BRAF V600E mutations in thyroid nodules according to Bethesda classification was: III (2.3%), IV (1.2%), V (24.7%), VI (71.8%), $p < 0.01$. All patients with a BRAF V600E mutation were found to have papillary thyroid carcinoma on final pathology. As for RAS-type mutations, patients had Bethesda scores of III (32.6%), IV (40.4%), V (21.3%), VI (5.6%), $p < 0.01$. When selecting out-patients with a RAS-type mutation, 79.7% (57/72) had well differentiated thyroid cancer. **Conclusion:** 96.5% of BRAF V600E mutations on FNA were associated with a Bethesda class of 5 or 6, 73.0% of RAS-type mutations were a Bethesda 3 or 4. This information may guide clinicians in the management of patients with thyroid nodules.

09:15 p.m. - 09:20 p.m.

Microvascular free flap reconstruction of the oral cavity without tracheotomy - K. Zhao, S. Nguyen, E. Prisman, S. Durham, D. Anderson, Vancouver, BC

Learning Objectives

Describe the possibility of performing microvascular free flap reconstruction without tracheotomy and its potential benefits.

Abstract

Traditional standard of care for free tissue transfer (FTT) to the oral cavity includes tracheotomy. However, tracheotomies may be associated with complications and prolonged hospital stay. An initiative to eliminate standard tracheotomy for all oral cavity FTT at our center was implemented in 2018. A retrospective chart review of patients undergoing FTT with or without tracheotomy for partial glossectomy (PG), segmental mandibulectomy (SM) and maxillectomy defects from January 2018 to July 2019 was conducted. 99 patients were included (57% male; average age 60.1 years). 12/30 patients (40%) of the PG cohort, 17/42 patients (40%) in the SM cohort and 19/27 (70%) in the maxillectomy cohort did not have tracheotomy. Age (64.1 vs 55.9, $p = 0.01$) and T stage (3.1 vs 2.4, $p < 0.01$) were associated with tracheotomy while gender was not ($p = 0.39$). In the group with tracheotomy, there wasn't a significant difference in Body Mass Index (BMI) (25.5 vs 26.7, $p = 0.50$) or American Society of Anesthesiology (ASA) classification (2.2 vs 2.5, $p = 0.07$). Those without tracheotomy had a significantly shorter length of stay (8.1 vs 13.5, $p < 0.01$) and shorter time to resume feeding (5.04 vs 6.56, $p = 0.02$). No patients with postoperative airway complications in the no tracheotomy group. Oral cavity FTT without tracheotomy can be achieved safely and is associated with shorter length of hospital stay. Further analyses will be conducted to determine the factors contributing to elimination of tracheotomy.

09:20 p.m. - 09:25 p.m.

Differences in the Genomic Landscape of Head and Neck Squamous Cell Carcinoma by Tumour Site - A. Nichols, H.A. Kim, M. Shaikh, F. Ghasemi, N. Mundi, E. Di Gravio, J.W. Barrett, London, ON

Learning Objectives

By the end of this presentation, meeting participants will be able to observe that significant mutational differences exist between head and neck squamous cell carcinomas in different primary subsites.

Abstract

Background: Head and neck squamous cell carcinoma affects several anatomical sites (oral cavity, oropharynx, etc), which are managed differently with either primary surgery or radiation. It is unknown whether tumours within these sites have different genetic landscape after controlling for human papillomavirus (HPV) status. **Methods:** We downloaded the clinical information and single nucleotide variation (SNV), copy number aberration (CNA), and mRNA expression data from The Cancer Genome Atlas (TCGA) head and neck cancer cohort. Pathway enrichment analysis was done using GSEA and ReactomePA. There were too few HPV-positive cases (n=67) to analyze and thus they were excluded. We then analyzed the mutational differences between the HPV-negative oral cavity (OC), oropharynx (OP), hypopharynx (HP), and larynx (LC) cohorts. **Results:** HPV-negative LC had a higher mutational burden than OC and OP cancers ($p < 10^{-4}$). LCs were enriched in CSMD3, NSD1, DCHS2 and ANK2 SNVs, while OCs were enriched in CASP8 mutations after accounting for the false discovery rate (FDR) correction ($FDR < 0.1$). There was a large number of shallow deletions that differed between LCs and OCs (8014 genes, $FDR < 0.1$). Pathway analysis revealed that LCs were enriched for mutations affecting the extracellular matrix, and shallow deletions of genes affecting interferon signaling and response to metal ions. OCs were enriched for mRNA expression of genes involved in FGFR signaling. **Conclusion:** Significant genomic differences were identified between tumour sites within the head and neck. Further study is warranted to determine if these genetic variations portend differential response to treatment with surgery, radiation or chemotherapy.

09:25 p.m. - 09:30 p.m.

Discussion

09:30 p.m. - 09:35 p.m.

Toxicity and Survival Outcomes of Chemoradiation for Consecutive Cases of Early T Stage Oropharyngeal Cancer at a Tertiary Care Institution - E. Di Gravio, A. Nichols, London, ON

Learning Objectives

1) By the end of this session, the audience will be able to describe the current treatment choices for oropharyngeal squamous cell carcinoma. 2) By the end of this session, the audience will better appreciate the toxicity profile for chemoradiation for early-stage oropharyngeal squamous cell carcinoma. 3) By the end of this session, the audience will be able to explain the limitations with previously reported toxicity profiles for chemoradiation treatment of early-stage oropharyngeal squamous cell carcinoma.

Abstract

Background: Transoral robotic surgery (TORS) has become the preferred modality in the United States for the treatment of oropharyngeal cancer largely due to assumptions of fewer toxicities and improved quality of life. However, most retrospective studies comparing conventional radiotherapy/chemoradiation to TORS are intrinsically biased since patients treated with radiotherapy/chemoradiation tend to have larger and more advanced disease than patients treated with TORS. **Methods:** Consecutive cases of early T stage (T1-T2) oropharyngeal cancer presenting to our centre between 2014-2018 treated with RT or CRT were reviewed. Patient demographics, treatment details, survival outcomes and toxicity were collected. Toxicities were retrospectively graded using the CTCAE criteria. **Results:** A total of 198 patients were identified, of which 82% were male and 73% were HPV-positive. HPV-positive patients experienced markedly improved 5-year overall survival (86% vs 64%, $p < 0.05$). 68% of patients experienced a grade 2 toxicity, 48% a grade 3 and 4% a grade 4 with the most frequent toxicities being dysphagia, neutropenia and ototoxicity. The rates of gastrostomy tube dependence at 1 and 2 years were 2.5% and 1% respectively. There were no grade 5 (fatal) toxicities. **Conclusions:** Primary RT or CRT provides outstanding survival for early T stage HPV-positive disease, but carries frequent toxicities including dysphagia, neutropenia and ototoxicity. This study provides a reference for comparison for patients treated with primary transoral laser or robotic surgery.

09:35 p.m. - 09:40 p.m.

The Role of the ThyroSeq v3 Molecular Test in the Surgical Management of Thyroid Nodules in the Canadian Public Healthcare Setting - T.Y. Chen, B.M. Gilfix, J. Rivera-Ramirez, N. Sadegi, K. Richardson, M. Hier, V.-I. Forest, D. Fishman, D. Caglar, M. Pusztaszeri, R. Payne, Montreal, QC

Learning Objectives

By the end of this session, OTL surgeons will understand the advantage of using ThyroSeq v3 in clinical practice in the Canadian healthcare system and apply the McGill Algorithm to select candidates.

Abstract

Despite being the gold standard for diagnosing thyroid malignancy, 20-25% of fine-needle aspiration (FNA) cytological evaluations are considered indeterminate of malignancy. This limitation has led to the emergence of next-generation sequencing panel, ThyroSeq v3 (TSv3). Our goals were to evaluate the benign call rate (BCR) of TSv3 and assess its diagnostic performance and clinical utility in a public Canadian institution. This is a single-center study conducted at the Royal Victoria Hospital in Montreal, Canada between January and February 2019. Patients were offered TSv3 following the McGill Algorithm for ITN workup, a novel protocol developed at our institution to select only diagnostic surgery candidates in order to minimize waste of public resources. 50 ITNs underwent TSv3 testing; molecular analysis yielded 20 positive, 28 negative, and 2 negative but limited results. All 20 positive patients underwent surgery and 93% (n=26) of negative patients continued with surveillance. BCR was calculated as (negative and currently negative)/total, resulting in a BCR of 58%. All test-positive nodules resected were malignant on final pathology and all test-negative nodules resected were benign on final pathology, thus the test correctly classified the nodules in 100% of cases. TSv3 proved beneficial in classifying ITNs as positive or negative, avoiding surgery in the latter cases. We found a lower BCR than previously published studies which is largely attributable to the criteria of the McGill Algorithm. In the Canadian public healthcare system, preventing unnecessary surgery represents significant cost savings for the provincial government while also improving patient quality of life.

09:40 p.m. - 09:45 p.m.

Outpatient versus Inpatient Parotidectomy: A Systematic Review and Meta-analysis - D. Forner, D. Lee, C. Walsh, Toronto, ON, S.M. Taylor, Halifax, NS, J. Freeman, Toronto, ON

Learning Objectives

1. At the end of this presentation, participants will be able to compare risk of complication between inpatient and outpatient parotidectomy 2. At the end of this presentation, participants will be able to describe the risk of unplanned healthcare utilization in outpatient and inpatient parotidectomy 3. At the end of this presentation, participants will be able to describe a preliminary set of selection criteria for outpatient parotidectomy

Abstract

Background: Parotidectomies are commonly performed procedures, typically completed on an inpatient basis. However, recent evidence has shown the potential for parotidectomies to be performed as an outpatient procedure. Complications and unplanned health care utilization were compared between patients undergoing outpatient versus inpatient parotidectomy through a systematic review and meta-analysis. **Methods:** MEDLINE, EMBASE, and the Cochrane library were searched. Studies comparing the outcomes of outpatient parotidectomy with those of inpatient parotidectomy were included. Risk of bias was assessed using the Newcastle-Ottawa Scale. Postoperative complications included hematoma, facial nerve dysfunction, seroma, fistulisation, Frey syndrome, and wound infection. Unplanned healthcare utilization included rates of 30-day re-admission, re-intervention, and emergency department presentation. **Results:** 1018 non-duplicate articles were screened. Five retrospective cohort studies were included in total. There were fewer complications found in the outpatient group (RR = 0.61, 95% CI: 0.40 to 0.93). Outpatient procedures were more commonly performed on patients who had fewer comorbidities, less extensive planned surgery, and who lived in closer proximity to the hospital. Unplanned healthcare utilization varied considerably, but remained low for outpatient parotidectomy patients, ranging from 0 to 2.0%. **Conclusion:** Outcomes are comparable between outpatient and inpatient parotidectomy and appear safe in select patients. Further work is needed to describe a satisfactory set of criteria for appropriate patient selection, and evidence still remains low quality overall.

09:45 p.m. - 09:50 p.m.

Discussion

09:50 p.m. - 09:55 p.m.

The Longitudinal Effect of Post-Operative Radiotherapy on Functional Outcomes in Advanced Oral Squamous Cell Carcinoma - C. Lane, C. Myers, A. Cooke, P. Kerr, Winnipeg, MB

Learning Objectives

- 1) The audience will identify common measures of functional outcome in head and neck cancer. 2) The audience will be able to describe adverse effects of adjuvant radiotherapy in oral cavity cancer.

Abstract

Background: Postoperative radiotherapy is selectively administered to patients with oral cancer with aggressive features. The functional cost of adjuvant radiotherapy has not been clearly quantified. The objective of this study was to determine the longitudinal effect of postoperative radiotherapy on functional outcomes for patients with stage III/IV oral squamous cell carcinoma. **Methods:** Population-based prospectively collected retrospectively reviewed cohort study conducted between the years 2003-2018 inclusively. Both patient and clinician-rated measures were used to assess impairment, function and social participation at pre-treatment and at 3,6,12, 24 and 36-months post-treatment appointments. Functional

outcome measures included: Speech Handicap Index (SHI-10), Head and Neck Performance Status Scale (HN-PSS), Royal Brisbane Hospital Outcome Measure for Swallowing (RBHOMS), and modified Edmonton Symptom Assessment Score (mESAS) for xerostomia and dysphagia. **Results:** 118 participants met inclusion criteria and had functional outcome data; 43 in the surgery alone group and 75 in the adjuvant radiation group. Adjusted functional outcomes were worse in adjuvant radiation group for feeding tube dependence (mean difference[MD]=0.53, P=0.032), normalcy of diet (MD=12.2, P=0.002), eating in public (MD=11.5, P=0.018), and xerostomia (MD=1.9, P=0.001). Outcomes for speech handicap (MD=0.15, p=0.48) and understandability of speech (MD=2.42, P=0.50) were not significantly different. **Conclusion:** Treatment of oral carcinoma with post-operative radiotherapy has a measurable and lasting adverse effect on feeding tube dependence, public eating, diet, and xerostomia. Quantification of these effects enables physicians and patients to make informed treatment decisions that consider the potential improved local control versus negative effects of adjuvant radiotherapy on oral function.

09:55 p.m. - 10:00 p.m.

Molecular Markers in Follicular and Hurthle Cell Carcinoma: Findings on Molecular Testing - E. Kang, Sena Turkdogan, E. Kay-Rivest, V.-I. Forest, M. Hier, M.P. Pusztaszeri, R. Payne, Montreal, QC

Learning Objectives

1. Identifying mutations specific to follicular and Hurthle cell carcinoma 2. The potential of molecular genetic testing in context of personalizing management for patients with thyroid cancer

Abstracts

Background: Although molecular genetic testing for well differentiated thyroid carcinomas have advanced in the last decade, there is paucity in the pathologic confirmation of genetic mutations in Follicular Cell Carcinoma (FCC) and Hurthle Cell Carcinoma (HCC). This study aims to describe molecular test findings performed pre-operatively on indeterminate thyroid nodules with FCC and HCC on final pathology. Additionally, the aim is to identify whether there are mutations specific to FCC and HCC. **Methods:** We performed a chart review of patients with indeterminate thyroid nodules who had molecular testing and surgery at a McGill University teaching hospital. Clinicodemographic factors, preoperative characteristics, histopathology and molecular testing results were collected. Mutations identified were compared to the final histopathology. **Results:** A total of 1346 patients were included in the study. FCC was identified in 31/1346 patients, and HCC was identified in 16/1346 patients. In the FCC group, 9/32 nodules had molecular testing. 3/9 had one of the following mutations detected: PTEN, Copy Number Alterations (CNA) and Pax8/PPAR α . In the HCC group, 9/17 nodules had molecular testing. 5/9 had one or more of the following mutations detected: TP53, EIF1AX, HRAS, GEP, CNA and TERT. **Conclusion:** Molecular testing results for FCC and HCC did not identify mutations in 57% of cases. The most common mutation found in HCC was HRAS, GEP and CNA. There was not one mutation that was more common than the other in FCC. More studies are needed to identify specific mutations predictive of FCC and HCC preoperatively in indeterminate thyroid nodules.

10:00 p.m. - 10:05 p.m.

Attitudes Toward Medical Marijuana Use Among Head and Neck Cancer Patients - M. Levin, H. Zhang, M. Gupta, Hamilton, ON

Learning Objectives

1. By the end of this presentation, viewers will be able to understand how head and neck cancer patients perceive medical marijuana. 2. By the end of this presentation, viewers will be able to counsel their patients on the potential benefits that head and neck cancer patients report from medical marijuana use. 3. By the end of this presentation, viewers will be able to understand the practice patterns of head and neck cancer patients regarding medical marijuana. 4. By the end of this presentation, viewers will be able list reasons why head and neck cancer patients report they would and would not use medical marijuana. 5. By the end of this presentation, viewers will be able to consider how to most efficaciously prescribe medical marijuana to their head and neck cancer patients.

Abstract

Introduction: Evidence has demonstrated that marijuana may improve patient nausea and pain. Specific to head and neck cancer patients, research from our group has demonstrated that marijuana can improve psychosocial well-being and quality of life and has no impact on patient mortality. Data needs to be obtained regarding head and neck cancer patients' attitudes toward medical marijuana. This study aims to understand the practices of and perspectives on marijuana in head and neck cancer patients. **Methods:** A 17-question questionnaire regarding marijuana perspectives and practices was created by head and neck cancer surgeons and distributed to head and neck cancer patients at a tertiary cancer centre. **Results:** 35 head and neck cancer patients completed the questionnaire. 51% of these patients were marijuana-naive and 20% were actively using marijuana. Patients that had used or were using marijuana described benefit with symptoms of headache, pain, nausea, and loss of appetite. 77% of all patients considered marijuana as treatment for cancer related pain and 69% as treatment for cancer related anxiety. Of the 13 patients actively undergoing cancer treatment, 83% believed marijuana medications would help with symptoms during treatment. 69% of patients would be interested in learning more about marijuana and its effects on cancer related symptoms. **Discussion:** This is the first study to describe use patterns of and attitudes toward

10:05 p.m. - 10:10 p.m.

marijuana in the head and neck cancer patient population. By understanding these factors, interdisciplinary head and neck cancer teams may be able to safely prescribe and educate their patients on marijuana.
Discussion