

PEDIATRIC OTOLARYNGOLOGY

P1. A Pediatric Case of Nasal Lobular Capillary Hemangioma – L. Abdul-Sater, J. Manoukian, S. Alromaih, M. Tewfik, Montreal, QC

Learning Objectives

Through this presentation attendees will:

- 1) Learn that Lobular Capillary Hemangioma (LCH) should be evocated in the differential diagnosis of an endonasal mass in the pediatric population.
- 2) Appreciate that chromosomal mutations, along with trauma and hormonal changes may constitute an etiologic factor in the pathogenesis of LCH.
- 3) Realize that both radiologic and histological characteristic features may help in the correct diagnosis of the lesion avoiding unnecessary investigations and leading to the proper management.

Abstract

Background: Lobular Capillary Hemangioma (LCH) is a benign fibrovascular lesion of the skin and upper aerodigestive tract, but rarely originating from the nasal cavity. Although its etiology is unclear, it has been associated with hormonal changes, nasal trauma and recently reported chromosomal abnormalities.

Case: We describe the case of a 7 year old boy with LCH of the right nasal cavity, presenting with right nasal obstruction and epiphora, which was misdiagnosed as a Juvenile Nasopharyngeal Angiofibroma.

Conclusion: There have been very few cases of LCH of the nasal cavity reported in children. The authors feel that it should be considered in the differential diagnosis of a nasal mass in children. Unnecessary investigations could thus be avoided, especially in the context of a pediatric (more vulnerable) population and the appropriate treatment could be imparted.

P2. Foreign Body Aspiration and Ingestion in Infants and a Case of Glottic Foreign Body in a Child with Pre-existing Laryngeal Pathology: A Diagnostic Challenge – S. Shamon, J. Ludemann, A. Sharma, Vancouver, BC

Learning Objectives

By reviewing this poster, the audience will be able to:

1. Recognize the clinical presentation of foreign body aspiration at various levels of the aerodigestive tract.
2. Apply the anatomy of the larynx in diagnosing a laryngeal foreign body with a complex presentation.

Abstract

Objectives: There are numerous reports of foreign body aspiration (FBA) causing significant morbidity and mortality in children under the age of 5 years. Unwitnessed episodes can become chronic and difficult to diagnose because the presenting signs and symptoms may mimic a more common cause such as croup. The purpose of our study is to illustrate the challenge and approach to diagnosing a laryngeal foreign body (FB) in a child with pre-existing laryngeal pathology and to provide an overview of clinical presentations and investigations of FBA at various anatomic sites.

Methods: This is a case report where the diagnosis of laryngeal FB was initially missed in a 21-month old-infant. Two weeks later, the child experienced worsening symptoms.

Results: Flexible laryngoscopy revealed the presence of a plastic object in the subglottis, which was then removed under general anesthesia.

Conclusions: For children with pre-existing laryngeal pathology, a sudden unexplained worsening of laryngeal symptoms, particularly dysphonia and biphasic stridor, should prompt the clinician to consider the possibility of a laryngeal FB.

P3. Arytenoid Dislocation/Subluxation Secondary to Intubation Injury in Infants with CHARGE Syndrome – F. Chowdhury, H. El-Hakim, Edmonton, AB

Abstract

Arytenoid dislocation / subluxation (AD/S) is a rare clinical problem in general, and especially so in children. There is only one previously reported case in a newborn. We present here 2 cases. Notably these cases both involve children diagnosed with CHARGE syndrome.

Method: An eight year prospective surgical database was searched for cases of AD/S. Charts were retrieved for clinical and demographic details. A literature search on PubMed, Embase, Scopus and Web of Science for AD/S AND intubation AND CHARGE was conducted.

Results: Two cases of AD/S were identified, and both were CHARGE syndrome (boys). The database contained 3 other children diagnosed with CHARGE syndrome. Both situations occurred after elective intubation for cardiac surgery; affecting once the right, and in the second the left arytenoid. In both situations ipsilateral partial arytenoidectomy was required to alleviate airway obstruction. Only one similar injury was previously reported in an otherwise healthy infant in the English literature.

Conclusions: Difficult visualization of the larynx seems to be the only documented predisposing factor that might have played a role leading to AD/S in these cases. In both situations, arytenoidectomy was successful in managing the airway distress, in addition to control of salivary aspiration.

P4. Tympanocentesis Results of a Pediatric Myringotomy Population 2008-2010 – M. Brake, P. Hong, J. Cavanagh, C. Cron, Halifax, NS

Learning Objectives

1. Determine the spectrum of middle ear microorganisms of a modern pediatric tympanostomy tube population
2. Compare to results from previous time periods to evaluate the change in spectrum +/- antibiotic susceptibility
3. Consider the contributing factors of these changes and how they may effect the management of similar pediatric otolaryngology patients.

Abstract

Background: One of the most common surgical procedure in the pediatric population is undoubtedly myringotomy and tympanostomy tube insertion (M&T) for recurrent acute otitis media (AOM) or chronic serous otitis media (CAOM).

Objective: To evaluate the middle ear microbiology of a pediatric population, and determine if there has been a change in spectrum of microorganisms or their antibiotic susceptibility in the modern age of antibiotic therapy.

Methods: This study includes all consecutive patients under the care of one pediatric ENT surgeon undergoing M&T between the dates of September 1, 2008 and August 31, 2010. Tympanocentesis was performed on each middle ear immediately following the myringotomy, provided fluid was present, and was sent for microbiological analysis.

Results: A total of 241 children (average age of 4±3 years) and 517 ears had culture results as follows: normal flora (47.0%), no growth (35.0%), *H. influenzae* (9.5%), *S. pneumoniae* (4.3%), *M. Cattaralis* (2.7%) and *S. Aureus* (2.1%). Of the cultured bacteria, only 13.5% were found to be penicillin resistant. All *S. pneumoniae* cultures were shown to be penicillin sensitive.

Conclusion: Our study shows that the majority of middle ear effusions are sterile. Of those with growth, *H. influenzae* continues to surpass *S. pneumoniae* as the most common pathogen; however *S. Aureus* may be increasing in frequency.

P5. Modified Slide Tracheoplasty in a Newborn with Bronchial and Carinal Stenosis – M. Fandino, A. Campbell, F. Kozak, N. Roy, J. Chandler, C. Verchere, Toronto, ON

Learning Objectives

1. This poster presentation aims to describe a modification of the slide tracheoplasty technique that is especially appropriate for Congenital Tracheal Stenosis (CTS) complicated by stenosis of the carina with extension into the bronchi.
2. Otolaryngologists, residents and fellows will have a better understanding of the surgical and medical management in a newborn with Congenital Tracheal Stenosis (CTS).
3. Otolaryngologists, residents and fellows will be able to evaluate what is the best surgical approach for patients with CTS that extends into the carina and bronchi.

Abstract

Congenital Tracheal Stenosis (CTS) is a life-threatening condition that is associated with significant morbidity and mortality particularly when symptomatic presentation occurs in the newborn period. The most challenging form of CTS occurs when Long Segment Congenital Tracheal Stenosis (LSCTS) is associated with compromise of the carina and main stem bronchi. We report a case of a newborn with moderate degree distal tracheal stenosis, carinal, and main stem bronchial involvement who was managed

successfully with a modified slide and autologous rib graft tracheoplasty. The patient was discharged from hospital without ventilator support or oxygen requirement at 2 months of age. Follow up 7 months post repair notes an otherwise normal child with mild laryngomalacia and unilateral vocal cord paralysis. The details of this case and the surgical procedure are presented and the related literature is reviewed.

P6. Pediatric Myringoplasty: A Study of Factors Affecting Outcome – M. Knapik, I. Saliba, A. Abela, P. Arcand, M.C. Quintal, Montreal, QC

Objective: Evaluate audiologic and anatomic success rates for myringoplasty in a pediatric population. Identify prognostic factors and their interactions in the evolution of myringoplasty.

Methods: Retrospective review of medical records of all patients who have undergone myringoplasty between January 1st 1997 and June 1st 2007 at a tertiary pediatric center. Charts were reviewed for: age, sex, perforation side, etiology, size, type and location of perforation, season of surgery, type of myringoplasty, surgical technique, graft material, preoperative status of the operated and contralateral ear, history and number of prior otologic surgeries to the operated and/or contralateral ear, history of adenoidectomy or tonsillectomy.

Results: Anatomical success rates were 94.9 %, 84.9% and 70.1% at 6, 12 and 24 months respectively. Type of previous otologic surgery in the operated ear was found statistically significant for anatomical success. Audiological success rates were attained in 97.4%, 93.4% and 84.9% of patients at 6, 12 and 24 months respectively. A mean reduction of 4.3 dB of the GAP was achieved. Patient's age and season of surgery were statistically significant for audiological success.

Conclusion: Our results suggest that delaying surgery can cause permanent damage to the inner ear. Therefore, we advocate early myringoplasty, preferably before the age of 12. We suggest delaying surgery, whenever feasible, during winter months.

P7. Primary Pediatric Laryngeal B Cell Lymphoma - Challenges in Diagnosis – A. Manuel, T. Uwiera, E. Eksteen, C. Sergi, M. Belletrutti, Edmonton, AB

Learning Objectives

1. By the end of this session the otolaryngologist will be able to list the differential diagnosis of a pediatric supraglottic mass.
2. By the end of this session the otolaryngologist will be able to value the importance of the clinical history in assessment of pediatric laryngeal tumors.
3. By the end of this session the otolaryngologist will be able to consider the effect of per-operative steroids on the diagnosis of possible steroid sensitive malignancies.

Abstract

Primary laryngeal lymphoma is a rare entity accounting for 1% of laryngeal tumours. Challenges are encountered in its diagnosis due to its rarity, the non-specific presenting symptoms and difficulties in diagnosis. This is to some extent overcome by the advances in imaging and histological diagnostic means including immunohistochemical techniques, detection of kappa and lambda light chain antibodies, polymerase chain reaction and flow cytometry. We present the unusual case of a 6 year old girl who presented with new onset hoarseness and snoring. On examination, she was overtly stridulous and flexible nasopharyngoscopy revealed a smooth uniform mass involving the epiglottis and left arytenoid and pyriform causing moderate airway compromise. She underwent laryngobronchoscopy with debridement and biopsy. Recurrence of symptoms at ten to fourteen day intervals warranted repeated treatments with intravenous steroids and debridement until diagnosis was confirmed. Peri-operative intravenous steroid use is useful in managing airway edema but in this case confounded diagnosis due to partial treatment of the laryngeal malignancy. Primary pediatric laryngeal lymphoma is exceedingly rare. Consideration of unusual causes of airway obstruction and epiglottic swelling are warranted in children without systemic features of infection.

P8. Asthma: The Great Imitator in Foreign Body Aspiration – J. Saliba, J. Manoukian, S. Daniel, L. Nguyen, T. Mijovic, Montreal, QC

Learning Objectives

By the end of this presentation, the on-call otolaryngologist will be able to evaluate the need for a trial of an anti-asthma treatment prior to undergoing a rigid bronchoscopy when consulted for an asthmatic patient with a suspected foreign body aspiration in the tracheobronchial tree.

Abstract

Objective: To determine the prevalence of asthma in children who underwent rigid bronchoscopy (RB) for a suspected foreign body aspiration (sFBA) in the tracheobronchial tree and to identify characteristics of patients who could benefit from a trial of anti-asthma treatment prior to undergoing a diagnostic bronchoscopy.

Methods: Retrospective chart review of children with sFBA in the tracheobronchial tree who underwent RB at the Montreal Children's Hospital (2006-2009). Patient characteristics such as delay between initial choking episode and first otolaryngology evaluation, clinical, radiologic and bronchoscopic findings and history of asthma were analyzed.

Results: A total of 25 children underwent a RB for sFBA. Foreign bodies (FB) were found in seven of these, none of which were asthmatics. In the 18 children who had a negative bronchoscopy (no FB), four were asthmatics (22.2%). Three out of these four had a delay of more than 24h between the initial choking episode and the first otolaryngology evaluation.

Conclusions: Asthmatic children with sFBA are more likely to have a negative bronchoscopy than non-asthmatics, especially when there is a delay between the initial choking episode and the first otolaryngology evaluation. Therefore, a trial of anti-asthma treatment prior to performing a diagnostic bronchoscopy in this subgroup of patients is justified.

P9. A Retrospective Analysis of Furlow Palatoplasty: Clinical Indications and Outcomes – W. Chow, M. Husein, A. Dworshak-Stokan, P. Doyle, D. Matic, London, ON

Learning Objectives

By the end of this session the audience will:

- 1) be able to describe the anatomical dysfunction in velopharyngeal insufficiency
- 2) understand perceptual speech scores as a measure of velopharyngeal insufficiency
- 3) describe the use and success of Furlow palatoplasty in treating velopharyngeal insufficiency

Abstract

Objectives: The Furlow palatoplasty (FP), which lengthens and restores the musculature of the soft palate, is one of the surgical treatments for velopharyngeal insufficiency (VPI). Studies have demonstrated a high success rate in treating cleft palates and VPI. The decision to perform a FP is dependent on the etiology of the VPI, patient anatomy and the surgeon's training. The purpose of this study was to define the patient population and speech outcomes of FPs performed at the London Health Sciences Centre (LHSC).

Methods: A retrospective chart review of FP at LHSC was performed. Patient age, genetic syndromes, presence of a cleft palate and perceptual speech scores (PSS) (ACPA scoring scale) was collected. PSS of 2 or less defined a successful operation.

Results: 25 charts were reviewed. 68% had a submucous cleft and the remaining had a cleft lip and palate. Average PSS for hypernasality and audible emission preoperatively was 4.09 ± 1.02 and 4.09 ± 1.19 , respectively. At 3-months post-operation, hypernasality and audible emission PSS decreased to 1.92 ± 1.06 and 1.96 ± 1.23 , respectively. Similar PSS were reported at 1-year post-operation regardless of the presence of a submucous cleft, cleft palate or genetic syndrome.

Conclusions: The FP provides a good surgical approach to treating VPI in patients with a submucous cleft or cleft palate with successful outcomes at 1-year.

HEAD AND NECK SURGERY

HN1. Bilateral Vagal Paragangliomas Presenting as Carotid Body Tumors – H. Zhang, S.M. Taylor, C. Bartlett, I. Fleetwood, Halifax, NS

Learning Objectives

1. To review the clinical presentation of bilateral chylothorax after neck dissection
2. To explain possible causes of chylothorax after neck dissection
3. To describe management strategies of chylothorax
4. To review the literature of cases involving bilateral chylothorax following neck dissection and describe success rates for treatment options

Abstract

Objectives: To present a rare case of bilateral chylothorax following neck dissection and to perform a systematic review of the literature.

Case Report: A case of bilateral chylothorax following bilateral neck dissection and total laryngectomy is presented. No chyle leak was found via neck drains. The diagnosis was made after a large pleural effusion was discovered on chest x-ray. Treatment was successful after drainage with parenteral nutrition.

Methods: A systematic review of the English literature on Medline, Pubmed, Embase and Scopus was conducted by 3 independent reviewers. Since 1903 20 cases of bilateral chylothorax following neck dissection have been reported. These were reviewed for: patient characteristics, type of surgery, and treatment.

Results: 8 patients underwent bilateral and 18 unilateral neck dissection. The primary lesion was in the thyroid in 7 patients and in the upper aerodigestive tract in the remaining cases. All cases were discovered within the first 72 post-operative hours and required thoracostomy tubes for fluid evacuation. 50% were successfully treated with low-triglyceridic or parenteral nutrition, while 50% required surgical exploration.

Conclusion: Bilateral chylothorax is a rare complication of neck dissection, which has a 50% chance of responding to conservative management consisting of low triglyceride or parenteral nutrition.

HN2. Atypical Complications Following Surgical Excision of Carotid Body Tumors – L. Jain, S. M. Taylor, I. Fleetwood, R. Hart, J. Trites, Halifax, NS

Abstract

Objectives: To highlight two atypical post-surgical sequelae witnessed following carotid body tumor excision, first bite syndrome (FBS) and auricular dystonia specifically. In the literature to date, reports on these post-surgical sequelae and their potential etiologies and treatments are scarce.

Methods: Patient charts for the atypical cases seen were extensively examined, and research was collected from the literature to explain the underlying mechanisms.

Results: Evidence supports the interruption of sympathetic innervation to the parotid gland as the causative factor in FBS development, while facial nerve synkinesis is a likely explanation for the display of auricular dystonia. In addition, an awareness of the most current and efficacious treatment options is essential for mediating such complications when they do arise. BTA, a minimally invasive therapeutic option, has been used extensively in treating numerous head and neck disorders and has been proven to minimize symptoms of FBS and facial dystonia, ameliorating the quality of life of these patients.

Conclusions: For surgeons operating in the parapharyngeal space, an awareness and understanding of the pathophysiology and treatment of rare post-operative complications of carotid body tumors, including first bite syndrome and auricular dystonia, is essential to minimizing their occurrence, hence reducing post-operative morbidity.

HN3. CO2 Laser Resection of a Supraglottic Rhabdomyoma: Case Report and Review - J. Belyea, S. M. Taylor, D. O'Brien, R. Hart, J. Trites, Halifax, NS

Learning Objectives

1. To demonstrate the presentation of a supraglottic rhabdomyoma
2. To illustrate the histopathological characteristics of an adult-type rhabdomyoma
3. To review the surgical technique of CO2 laser excision of a supraglottic rhabdomyoma
4. To present a case report of a supraglottic rhabdomyoma excised by CO2 laser, without evidence of recurrence
5. To show the current evidence for CO2 laser excision of supraglottic rhabdomyomas

Abstract

Rhabdomyomas are rare benign tumours of striated muscle tissue that can be divided into cardiac and extracardiac types. Cardiac rhabdomyomas are associated with tuberous sclerosis, whereas extracardiac varieties are not associated with any particular syndrome. Approximately 70% of rhabdomyomas found outside the heart occur in the head and neck. Rhabdomyomas are typically solitary lesions; although, multifocal lesions have been described. However, there are no reported cases of malignant transformation of a rhabdomyoma to a rhabdomyosarcoma. There have been 32 cases of laryngeal rhabdomyoma reported. Of these, 10 cases were reported in the supraglottic space. We present the 11th reported case of a supraglottic rhabdomyoma, and the first to be managed with laser resection without evidence of recurrence of the tumor.

HN4. Accuracy of Fine-needle Aspiration Biopsy of the Parapharyngeal Space Tumours - R. Hart, A. Amason, S.M. Taylor, J. Trities, J. Nasser, M. Bullock, Halifax, NS

Learning Objectives

- To appreciate the challenges of fine needle aspiration in the parapharyngeal space.
- To understand the different cytological preparations and their impact on the diagnostic rate.
- To understand the overall diagnostic accuracy of FNA in the workup of a parapharyngeal mass.

Abstract

Background: Fine-needle aspiration biopsy (FNA) of the parapharyngeal space (PPS) is a diagnostic challenge. PPS FNA has rarely been studied, with only four series of more than 20 cases.

Design: Pathology records were searched to identify all patients who underwent PPS FNA from Sept. 1991 to Aug. 2009. The FNA diagnosis was compared to the gold standard of subsequent histopathology or long term clinical follow up.

Result: 27 patients had 36 FNAs (9 patients had repeat FNAs). 11/36 (31%) FNAs were non-diagnostic. In the 25 diagnostic FNAs, there was sensitivity 89%, specificity 94%, PPV 89%, NPV 94%, and accuracy 92% for the diagnosis of positive or negative for malignancy. A correct specific diagnosis (e.g. schwannoma) was made in 9/25 (36%) cases. The non-diagnostic rate was significantly higher ($p < 0.025$) in FNAs prepared as conventional smear cytology (9/17 = 53%) versus liquid based ThinPrep cytology (2/19 = 11%).

Conclusion: Our institution has a high rate of diagnostic accuracy for classifying PPS FNAs as benign or malignant, but a lower rate of reporting a specific diagnosis. Non-diagnostic FNAs are frequent and occur more often with conventionally prepared smears than with ThinPrep. Improved specimen quality with ThinPrep seems to be a factor.

HN5. Bilateral Chylothorax Following Neck Dissection: Case Report and Systematic Review of the Literature – H. Zhang, H. Seikaly, P. Dziegielewski, A. Romanowsky, Edmonton, AB

Learning Objectives

1. To review presentations of vagal paragangliomas and carotid body tumours.
2. To discuss difficulties in differentiating vagal paragangliomas from carotid body tumours on preoperative clinical examination and imaging.
3. To discuss possible management options for bilateral vagal paragangliomas.

Abstract

Objectives: To present a rare case of bilateral vagal paragangliomas presenting as carotid body tumours and its possible management options.

Case Report: We present a case of a 44-year-old female presenting with a two year history of dysphagia and bilateral pulsatile parapharyngeal masses on trans-oral examination. A diagnosis of carotid body tumours was made using preoperative clinical examination along with CT and MR angiogram. During surgical resection it was revealed that the mass was emanating from the vagus nerve itself. Thus, an intraoperative diagnosis of vagal paragangliomas was made.

Outcome: Surgical resection of the larger left sided tumour was completed with vagal sacrifice due to the intimate relation between the tumour and the nerve. To avoid surgery and likely vagal sacrifice on the right side, the plan for the contralateral tumour is serial MRIs with the plan of using radiotherapy if there is significant tumour growth.

Conclusion: Bilateral vagal paragangliomas are hypervascular, benign, and rare tumours. Treatment options for the contralateral tumour after surgical resection of the first remain controversial.

HN6. Unilateral Polypoid Tonsillar Lesion: A Case Report of Tonsillar Lymphangioma and Review of Literature – E. Park, P. Hong, Halifax, NS

Learning Objectives

1. To understand clinical presentation, physical exam findings, and histopathological characteristics of tonsillar lymphangioma.
2. To understand differential diagnosis for tonsillar lymphangioma.

Abstract

Lymphatic malformations or lymphangiomas are congenital anomalies of the lymphatic system. These malformations most commonly present at a young age and typically involve the head and neck region. More specifically, young children can present with diffuse and soft neck mass without any significant symptoms.

Lymphangioma arising from the palatine tonsils in the oropharynx are rare. They tend to present as a unilateral polypoid lesion which is incidentally identified during an examination of the head and neck or during a tonsillectomy procedure. Some patients may complain of throat discomfort, dysphagia, or globus sensation.

A case report of tonsillar lymphangioma in a 4 year-old girl with symptoms of dysphagia with solid foods is presented, who was initially diagnosed with eosinophilic esophagitis and gastroesophageal reflux disease. In addition, a literature review of this pathology is performed.

HN7. The Forgotten Back: Pressure Ulcer Prevention Strategies in Prolonged Head and Neck Surgery, A Prospective Study - S. Aldhahri, L. Kennedy, Riyadh, S.A.

Learning Objectives

By the end of reading the poster, the health care professional should be:

1. alerted to the high risk of pressure ulcer development in patients going for prolonged head and neck surgery;
2. aware of the efficacy of different prevention methods and strategies;
3. aware of the importance of monitoring and simple documentation on the prevention of the disease progression.

Abstract

Objectives: 1. To determine the incidence of pressure ulcers(PU) post prolonged head and neck surgery; 2. To determine the outcome of interventional strategies on PU development over time

Method: Utilizing the FOCUS-PDCA model, an improvement plan was developed in patients undergoing surgery of ≥ 4 hour duration. A patient monitoring protocol was developed which included a pre-operative risk assessment form, an intra-operative skin integrity check list and a post-operative OR/ICU Nursing skin assessment handover. The patient was monitored for signs of PU for the next 7 days. pressure ulcer reduction interventions were evaluated including utilization of an OR Specialty mattress, intra-op documentation of preventative strategies, and use of OR positioning devices.

Results: Over 2 year period 1115 patients have been monitored. The initial PU incidence was 23.5%. After implementation of the Specialty Mattress, the incidence decreased to $<10\%$. With the implementation of other positioning devices, and Intra-operative prevention documentation, the incidence decreased to 5%. The PU were either stage I or II and none of the ulcers progressed to a higher stage. Duration of surgery was found to be the most important factor in PU development.

Conclusion: Downward trends in PU development were correlated with the implementation of interventional strategies. The high level of awareness, meticulous documentation and continuous monitoring will prevent further progression of an early stage PU.

HN8. Giant Cell Tumours of the Maxilla: Case Report and Literature Review – K. Smith, T. Gillis, K. Smith, J. Cho, Calgary, AB

Learning Objectives

1. By the end of this session, the learner/participant will be able to recognize the presenting characteristics of giant cell tumours in the maxilla.
2. By the end of this session, the learner/participant will be able to describe the management of giant cell tumours in the maxilla.
3. By the end of the session, the learner/participant will recognize the key histopathologic features of giant cell tumours.

Abstract

Background: Giant cell tumours (GCT) are a benign locally invasive tumour that accounts for 20% of all benign bone tumours. GCT that present in the head and neck are uncommon, representing only 2% of all GCT. GCT that present in the craniofacial skeleton other than the mandible are extremely uncommon, with most occurring in the sphenoid, ethmoid and temporal bones. Thus, GCT that present in the maxilla are extremely rare, with only a couple cases ever reported in literature.

Objectives: To present an unusual case of a 58 year old woman who presented with a primary giant cell tumour of the oral palate.

Methods: Case report and literature review.

Results: En bloc resection of the GCT including the hard palate, left maxillary tuberosity and the floor of the right maxillary sinus was performed. The patient was fitted with an obturator plate. The patient had no post-operative complications and was seen 4 months later with no signs of recurrence and good surgical results.

Conclusions: GCT of the maxilla are extremely rare. Diagnosis is based on histopathology and treatment is usually surgical with limited role for radio- and chemo-therapy. The prognosis is usually favourable.

HN9. Conjunctival Squamous Cell Carcinoma: A Rare Presentation of Orbital Mass in Two Patients – D. Thomas, J. Trites, J.G. Heathcote, C. Seamone, R. Hart, S.M. Taylor, Halifax, NS

Learning Objectives

1. By the end of the session, a conference participant will be able to recognize atypical features of CSCC in patients presenting with orbital masses.
2. By the end of the session, a conference participant will be able to describe the value of interdisciplinary care in the subject case reports.

Abstract

Objectives: To present two unusual cases of conjunctival squamous cell carcinoma (CSCC) and to compare the case presentations and treatments to recent literature.

Methods: Chart and literature reviews were completed.

Results: Two atypical cases of conjunctival squamous cell carcinoma are reviewed. This is a rare disease more commonly observed in areas of high sun exposure, where the annual incidence is 1-2.8 per 100,000. Both patients described herein were Caucasian men, aged 75 and 81 respectively, who presented with a several month history of a growing orbital mass and declining visual acuity. The physical findings, diagnostic and staging parameters, treatment and early outcomes are reviewed, as are the features which render these two cases atypical (site of origin and advanced stage).

Conclusion: Otolaryngologist-head and neck surgeons are not uncommonly faced with orbital masses. The authors present two cases of atypical CSCC and emphasize the inclusion of this pathologic entity in the differential diagnosis of orbital lesions, as well as the need for interdisciplinary care.

HN10. Focal Amplification of 9p13 in Oral Pre-Malignant Lesions – R. Towle, C. Garnis, I. Tsui, Vancouver, BC

Learning Objectives

1. To understand the importance of studying the molecular events driving oral cancer development.
2. To appreciate that amplification of 9p13 and subsequent changes in gene expression of some of the genes within the amplicon are likely one of the earliest events in the majority of oral cancers.

Abstract

Objectives: The survival rates for oral cancer have not significantly improved in the last two decades. This is largely due to the late stage of diagnosis and high rates of recurrence. A better understanding of the mechanisms driving oral tumourigenesis is required to make a positive impact on survival. My objective was to identify the key genetic events that are involved in oral cancer initiation and progression.

Methods: Whole genome DNA copy number profiling was performed on a panel of mild dysplasias that later progressed to invasive disease. Candidate genes mapping within regions of interest were selected based on expression analysis. Several genes were selected for additional functional analysis in cell model systems using lentiviral shRNA and expression vectors.

Results: A recurrent 2.4Mbp amplification mapping to chromosome 9p13 was identified. Four candidate genes, VCP, DCTN3, STOML2, and TLN1, were selected for functional assessment in cell models. Changes in oncogenicity of the manipulated lines were analyzed by comparing the rate of proliferation and degree of anchorage independence. Results indicate that these candidates may play a role in oral tumourigenesis.

Conclusion: Amplification of 9p13 and subsequent overexpression of VCP, DCTN3, and STOML2 may play a role in driving oral cancer progression.

HN11. Identifying MicroRNA Signatures Throughout Premalignant Progression Within An Oral Cancer Field – M. Gorenchtein, C. Garnis, S. Hughes, R. Towle, Y. Zhu, S. Durham, D. Anderson, C. Poh, Vancouver, BC

Learning Objectives

To understand how microRNAs can be used as a clinical tool in oral cancer management.

Abstract

Objectives: An improved understanding of the molecular basis of oral cancer, particularly the alterations that govern disease initiation and progression, is essential for developing novel strategies for diagnosis, predicting prognosis and establishing effective therapeutics. To date, the role of microRNAs (miRNAs), a class of non-protein-coding RNAs that negatively regulate gene expression, in oral tumorigenesis is largely unknown. Thus, the objective of this study is to identify aberrantly expressed miRNAs in oral premalignant lesions (OPLs).

Methods: We analyzed miRNA expression in histologically different OPL biopsies taken at the same time from a single, contiguous field. Diseased regions in the oral cavity were detected by a hand-held Fluorescence Visualization device capable of delineating occult disease proximal to oral tumors in real-time. Total RNA was isolated from each microdissected specimen and profiled for the expression of 742 human miRNAs.

Results: We have identified several candidate miRNAs that are differentially expressed at the earliest stages of oral cancer development.

Conclusion: MicroRNA deregulation is observed at the earliest stages of oral tumourigenesis. Delineation of key genetic events driving oral carcinogenesis is critical for improved disease management. Ultimately, our findings will aid in the development of novel platforms for risk assessment, diagnosis and novel targeted therapies.

HN12. A Malignant Carotid Body Tumour in a 28-Year Old Female with Familial Lipodystrophy: A Potential Novel Genetic Link – G. Tsang, J. Franklin, London, ON

Learning Objectives

1. To understand the diagnostic criteria for malignant paraganglioma.
2. To understand the demographics of head and neck paraganglioma.
3. To understand the genetic etiologies of head and neck paraganglioma.
4. To understand the genetic etiologies of lipodystrophy and their associations to the genetic etiology of head & neck paraganglioma.

Abstract

Congenital lipodystrophy of Berardinelli-Seip type (BSCL) is an autosomal recessive genetic disorder mapped to 11q13. Paragangliomas are exceedingly rare and malignancy is defined by the presence of regional metastasis. Malignancy is often associated with a genetic form of the disease and younger patients.

Methods: Case report with literature review

Results: A case of malignant carotid body tumor is presented in a patient with congenital lipodystrophy. The patient presented with neck mass circumscribing the carotid artery at its bifurcation. Surgical excision required carotid resection with saphenous vein graft. Metastatic paraganglioma was identified in 4 nodes confirming the diagnosis of a malignant carotid body tumor. Familial lipodystrophy is known to result of mutation of BSCL-2 located at 11q13. Similarly, the gene PGL-2, responsible for genetic form of paraganglioma is located at 11q13. Due to the rarity of these two disorders a genetic link is likely.

Conclusions: This is the first report to hypothesize a genetic relation between familial lipodystrophy and familial paraganglioma at the locus 11q13.

HN13. "Cervical Trophic Syndrome" The introduction of a Cervical Analogy to Trigeminal Trophic Syndrome – D. Angel, J. Franklin, London, ON

Learning Objectives

1. To understand the differential diagnosis of ulceration in the neck following head and neck cancer treatment
2. To identify the presence of a new entity referred to as "cervical trophic syndrome"
3. To understand the mechanism of disease proposed in "cervical trophic syndrome"
4. To understand that "cervical trophic syndrome" is a diagnosis of exclusion
5. To know the treatment and mechanism of effect for "cervical trophic syndrome"

Abstract

Trigeminal trophic syndrome, first described by Wallenberg in 1901, is a rare clinical entity in which cutaneous trophic ulceration develops within the trigeminal dermatome. These ulcers fail to heal and occur in the region of previous sensory nerve injury typically the nasal ala.

Methods: Patients following neck dissection suffer sensory loss. Chronic ulceration of greater than 3 months overlying the acromion and the coranoid process was observed in female patients following radical neck dissection in the absence of adjuvant radiotherapy. The areas were confirmed to be insensate on clinical exam. Biopsy ruled out malignancy.

Results: Following the utilization of an occlusive, non-adherent dressing changed every 3 days, the ulcerations which previously were chronic in nature healed.

Conclusion: It is proposed that there exists an entity for which we have named "cervical trophic syndrome" that is analogous to trigeminal trophic syndrome. These chronic ulcers present in non-radiated skin overlying boney structures resultant from repetitive trauma unbeknownst to the patient due to a lack of sensation in the region.

HN14. Swallowing Function Following Salvage Neck Dissection - K. Fung, S. Tam, S. Hawkins, A. Grewal, J. Franklin, A. Nichols, J. Yoo, London, ON

Learning Objectives

1. By the end of this session, the audience will be able to describe the patient reported changes in quality of life for patients undergoing salvage neck dissection for head and neck squamous cell carcinoma
2. By the end of this session, the audience will be able to describe the perceived impact on swallowing function in patients undergoing salvage neck dissection for head and neck squamous cell carcinoma

Abstract

Objectives: Dysphagia is a common side effect of chemoradiotherapy (CRT) following treatment of advanced head and neck squamous cell carcinomas (HNSCC) due to fibrosis and mucositis. In patients with extensive nodal disease, CRT may be insufficient for regional disease control and salvage neck dissection (SND) may be indicated. Swallowing function may be further impaired by SND. This study describes patient-reported quality of life and swallowing function following SND in a setting of previous CRT for HNSCC.

Methods: Prospective cohort study. All patients with advanced HNSCC with residual nodal disease following CRT who consented to SND were eligible for inclusion. Primary outcome measure was the M.D. Anderson Dysphagia Inventory (MDADI). Secondary outcome measure was the Head and Neck Quality of Life (HNQoL) questionnaire. Outcomes were obtained pre-operatively, and 1 and 3 months postoperatively.

Results: Eleven subjects completed the study. There was significant decrease in total MDADI score ($p=0.030$), emotional domain scores ($p=0.035$), and functional domain scores ($p=0.032$) from pre-op to 3 months. Overall HNQoL was similar over time in all domains.

Conclusion: Salvage neck dissection in a setting of previous CRT decreases patient-reported swallowing function and quality of life.

HN15. Long-Term Functional Donor Site Morbidity of the Free Radial Forearm Flap in Head and Neck Cancer Survivors – J. Belyea, S. M. Taylor, C. Bartlett, J. Orlik, J. Trities, R. Hart, Halifax, NS

Learning Objectives

1. To briefly illustrate the technique of forearm free flap reconstruction.
2. To provide a current review of the literature of the controversy over forearm free flap donor site morbidity.

3. To demonstrate an objective means of measuring strength, range of motion, manual dexterity, and sensation of the wrist and hand and also to present a validated subjective framework for patient/observer scar assessment.
4. To assess the functional donor site morbidity of the forearm free flap in patients surviving at least two years after ablative head and neck cancer surgery in Halifax, Nova Scotia.

Abstract

Objective: To assess the functional donor site morbidity of the forearm free flap in patients surviving at least 2 years after ablative head and neck cancer surgery

Methods: This study involved nine long-term survivors who had forearm free flaps to reconstruct head and neck defects. All flaps were raised from the non-dominant arms. The non-donor side acted as a control for all patients. Objective measurements of strength, range of motion, manual dexterity and sensation of the wrists and hands were obtained using dynamometry, goniometry, pegboard test, and Semmes Weinstein monofilaments, respectively. Subjective measurements included a validated patient questionnaire

Results: Pronation at the wrist, manual dexterity and sensation were found to be significantly reduced in the donor side compared to the non-donor side. Inter-rater agreement between the two observers was found to be poor, except for an acceptable correlation between overall scar opinions. No correlations were found between any subjective or objective items or between the patient's and the observers' subjective evaluations

Conclusions: Donor site morbidity following radial forearm flap harvest can be demonstrated with objective testing in long-term head and neck cancer survivors. This morbidity is accepted and well tolerated by head and neck cancer patients. We have shown that while objective testing can demonstrate donor site morbidity, this is not reflected in subjective head and neck cancer patient reporting

HN16. N3 Head and Neck Patients, Retrospective Treatment Outcome Review at the Montreal Jewish Hospital – E. Sela, M. Hier, K. Sultanem, M. Black, A. Mlynarek, R. Payne, Montreal, QC

Learning Objectives

1. The learner will understand how N3 head and neck cancer patients are treated.
2. The learner will understand treatment outcomes for N3 head and neck cancer patients.
3. The learner will be able to anticipate treatment failure patterns in N3 patients .

Abstract

Objective: Our objectives were to evaluate our treatment of N3 head and neck cancer patients, to determine our disease control rates, and to assess the role of planned neck dissection post chemo +/- radiation treatment.

Methods: A retrospective review of 31 patients was conducted in a series from 2002 to 2010. All patients had N3 disease. We assessed for demographics, tumor site, histology, stage, modality of treatment and outcomes. Results were statistically analyzed.

Results: Tumor primary sites included pharynx, larynx, oral cavity, nose and unknown primary. Tumor types included SCC, undifferentiated ca. and lymphoepitheiloma. T stage ranged from Tx to T4 and all patients were M0. Age range was from 37 to 90 years, and included 27 males and 4 females. Treatment modalities implemented included radiotherapy, chemotherapy and surgery in various combinations. Follow-up period ranged from 1-8 years. There were a total of 7 treatment failures. Average overall survival was 35.4 months, and 35.3 months disease free survival. A total of 7 patients required a salvage neck dissection.

Conclusions: We conclude that N3 disease is very effectively managed with XRT + chemotherapy. Salvage neck dissection is rarely required. Survival for N3 patients is significantly better than historically reported.

HN17. Transoral Resection of Large Parapharyngeal Space Tumours – M. Shakeel, A. Hussain, D. Hurman, K. Ah-See, Aberdeen, Scotland

Learning Objectives

1. A new minimally invasive surgical technique
2. Compare with traditional approaches
3. Demonstrate efficiency and safety of the procedure

Abstract

Objectives: To describe minimally invasive transoral approach for resection of parapharyngeal space (PPS) tumours. Demonstrate access, resection, repair and outcome.

Methods: Four cases were prospectively included in the study. The data collected includes age, sex, site, size, pathology, radiological investigations, surgical excision, complications and outcomes.

Results: Three females and one male patient underwent transoral resection of PPS sized 3-6 cm. The pathology included two pleomorphic salivary adenomas, one schwannoma and one primary adenocarcinoma. All tumours were resected completely without any technical difficulty. The healing was quick and by primary intention. Patients resumed oral feeding on recovery from general anaesthesia and did not require any significant analgesia beyond the first two days. Patient with adenocarcinoma received postoperative radiotherapy and remains disease free two years post treatment. No recurrences were observed in patients with benign tumours. No neurovascular injury occurred during surgery and no secondary bleeding was observed.

Conclusions: We have demonstrated successful and safe execution of transoral resection of large PPS tumours. There were no intra and post-operative complications and there has been no recurrence during the follow-up period. In our experience it appears to be efficient, safe and minimally invasive compared to the established techniques.

ENDOCRINE

E1. An Unusual Case of Locally Invasive Plexiform Schwannoma of the Thyroid Gland – E. Akbari, S. Durham, E. Chang, K. Berean, D. Schaeffer, Vancouver, BC

Learning Objectives

- 1) The audience will be able to list the differential diagnosis of a thyroid mass.
- 2) The audience will be able to describe the clinicopathological characteristics of plexiform schwannoma in the head & neck region.

Abstract

Objective: To present a rare case of locally invasive plexiform schwannoma of the thyroid gland without association with a syndrome such as neurofibromatosis (NF),

Methods: Case report and review of the literature.

Result: A previously healthy 31 year old man presented with a 2 month history of enlarging thyroid mass and progressive shortness of breath in 2009. He underwent an exploration of the thyroid area and a subtotal excision was performed. Intraoperatively, a large mass expanded the thyroid in the midline and infiltrated through the cricothyroid membrane into the right paraglottic space. The histopathology showed a plexiform schwannoma with no malignant transformation. The patient has done well post operatively with serial clinical and CT scan follow ups. To our knowledge, there is only one case of plexiform schwannoma of the thyroid gland (not associated with NF) reported in the English literature.

Conclusion: Plexiform schwannoma usually involves the skin, and deep masses involving the thyroid and larynx are distinctly unusual. The involvement of thyroid and larynx, assuming a single nerve/plexus is involved, suggests that it was arising from the cervical sympathetic plexus. This case report and literature review provides an overview of plexiform schwannoma of the head and neck region.

E2. Schwannoma of the Cervical Sympathetic Chain: An Unusual Thyroid Nodule – S. Sahmkow, N. Audet, V. Rolland, N. Sylvie, Québec, QC

Learning Objectives

- The reader will be able to describe the characteristics and adequate treatment of cervical sympathetic chain schwannomas.
- The reader will be able to consider the cervical sympathetic chain schwannoma as part of the differential diagnosis of a cervical mass.

Abstract

Schwannomas are neurogenic tumours arising from the nerve sheath. They are slow-growing, encapsulated and usually solitary lesions. Malignant degeneration is rare. Although the head and neck are the most common sites of schwannomas, extracranial location is unusual. In particular, less than 50 cases of cervical sympathetic chain schwannomas have been reported, few of them on the thyroid region. We report the case of a 61 years old woman complaining of intermittent dysphagia. Imaging studies showed a

left paratracheal 4 cm-mass over the oesophageal wall as well as a multinodular goitre with a well defined 2 x 2 x 3.6 cms-bilobed and hypoechoic left thyroid nodule. A transoesophagic biopsy described atypical but non diagnostic cells. No cellularity was obtained on fine needle aspiration of the thyroid nodule. At the time of left hemithyroidectomy, a retrorecurrential distinct 2 cm-mass was discovered and resected after 360o dissection of the recurrent laryngeal nerve. The surgery was performed as an outpatient procedure. Besides nodular follicular hyperplasia of the thyroid gland, definitive histopathology revealed a schwannoma which may have arisen from one perioesophagic sympathetic nerve. The review and discussion of the related literature is also presented.

E3. A National Survey of Practice Patterns in the Management of Glottic Cancer in Canada – F. Makki, S.M. Taylor, B. Williams, M. Rajaraman, R. Hart, J. Trites, T. Brown, Halifax, NS

Learning Objectives

This presentation will compare the current practice patterns among radiation oncologists and head & neck surgeons with respect to glottic cancer of various stages.

This presentation will further evaluate preferences in approaches to margins in laryngeal cancer of various stages.

Abstract

Objective: This study seeks to describe the current trends in management of glottic cancer in Canada.

Methods: An online survey was distributed to all head and neck (H&N) surgeons and all radiation oncologists (RO) in Canada. Respondents were asked to choose management recommendations for a series of tumor descriptions and to offer their opinion of margin evaluation. Results were compiled and analyzed using descriptive statistics for frequencies and chi-square analysis for comparison between H&N and RO.

Results: The survey attained a response rate of 60% among H&N and 20% among RO. There was a significant difference in choice of management for T1a, T1b, T2a, and T2b tumors with RO heavily favoring radiation therapy (XRT) and H&N opinion divided between XRT and transoral laser microsurgery (TLM). There was no significant difference of opinion in the treatment of T3 and T4a tumors. The size of an adequate margin was significantly different between RO and H&N, as was the management of a positive margin.

Conclusion: Compared to previous surveys, this study reflects a move toward TLM as the preferred treatment for T1a glottic cancer among H&N surgeons while RO continue to favor XRT. The results also show a split in opinions among H&N surgeons with respect to TLM versus XRT for early stage glottic tumors. The study underscores a difference of opinion between specialties for management of glottic cancer and the need for a definitive comparison study to guide recommendations.

E4. Secondary Total Thyroidectomy Following Laryngopharyngectomy with Free Flap Reconstruction - J. Percy, S.M. Taylor, R. Hart, J. Trites, Halifax, NS

Learning Objectives

1. Participants will be able to describe the surgical challenges posed by previous surgery, reconstruction and irradiation of the operative site.
2. Participants will observe that it is possible to identify residual thyroid tissue in the setting of previous laryngopharyngectomy, reconstruction and irradiation.
3. Participants will be able to describe how an esophageal bougie can be used as a surgical aid in secondary total thyroidectomy.

Abstract

Objectives: We followed a patient with squamous cell carcinoma of the supraglottic larynx. Four months after chemoradiation, dysphagia and edema necessitated total laryngectomy, partial pharyngectomy, left radial forearm free flap and left thigh split-thickness skin graft; the thyroid was not removed. Pathology suggested metastatic papillary thyroid carcinoma and it became necessary to remove the remaining thyroid. The objective of this case is to demonstrate the possibility of thyroidectomy post-laryngopharyngectomy, reconstruction and irradiation.

Methods: The thyroid was approached through the upper margin of the cervical skin paddle of the free radial forearm flap. An esophageal bougie was placed to confirm the location of the neopharynx. Despite post-radiotherapy and surgical scarring both thyroid lobes were identified.

Results: Pathology reported atrophic, fibrotic thyroid tissue with oncocytic metaplasia and atypia, establishing a microscopic follicular variant of papillary thyroid carcinoma.

Conclusions: This is the first reported case of a total thyroidectomy following total laryngectomy and free flap reconstruction of the neopharynx and cervical skin. We have shown that this surgery can be performed without complication. We also strongly recommend that an esophageal bougie be used as a surgical landmark to prevent neopharyngeal injury and to aid in the identification of the residual thyroid.

E5. Incidence of Parathyroid Tissue in Level VI Neck Dissection – J. Cavanagh, E. Graham, R. Hart, J. Trites, M. Bullock, S. M. Taylor, Halifax, NS

Learning Objectives

By viewing the poster the reader will:

- be able to describe the risks associated with level VI neck dissection completed with thyroid surgery;
- recognize risk factors associated with accidental and incidental parathyroid excision;
- be able to recognize risk factors associated with hypoparathyroidism following thyroid surgery.

Abstract

Objectives: Level VI central neck dissections are commonly completed with thyroidectomy. This procedure involves risk of damage to, or incidental excision of, one or more of the parathyroid glands.

Methods: This study examined the pathology reports of patients undergoing thyroid surgery to determine the incidence of parathyroid tissue associated with level VI neck dissections and the risk factors associated with incidental parathyroidectomy.

Results: Eighty-seven pathology specimens were analyzed. The incidence of parathyroid tissue associated with level VI neck dissections was 41.4%. We discovered that a higher frequency of incidental parathyroid tissue was located in level VI neck dissections among patients discovered to have malignant thyroid disease. There was no significant association between incidental parathyroidectomy and the sex of the patient, the age of the patient, the type of thyroid surgery, or transient or permanent hypoparathyroidism.

Conclusion: A large percentage of level VI neck dissections in thyroid surgery were associated with incidental parathyroid tissue. A more detailed examination of surgical specimens may decrease this possibly preventable surgical complication.

E6. A Case of Medically Refractory Thyrotoxicosis with low-output Heart Failure Treated with Total Thyroidectomy – S. Ghosh, J. Harris, V. Biron, A. Voth, Edmonton, AB

Learning Objectives

By the end of this session, a student, resident, or medical staff/surgeon will understand the indications for a total thyroidectomy in patients with fulminant thyrotoxicosis and secondary heart failure. They will understand the possible medical treatment options, their value, and when to select a surgical treatment plan, indications, contraindications, and potential complications with this procedure in this particular clinical setting.

Abstract

Background: Thyrotoxic crisis is a severe hyperthyroid state that can lead to decompensation of one or more organ systems. Early recognition with aggressive medical management is essential to reduce morbidity and mortality. In rare cases, thyrotoxicosis may persist despite aggressive medical management, which may necessitate thyroidectomy. We report a rare case of medically refractory thyrotoxicosis with low-output heart failure and high peri-operative risk successfully treated with total thyroidectomy.

Materials and Methods: Review of the patients' charts and a review of the literature involving medically refractory thyrotoxicosis.

Results: A 71 year old male presented with thyroid storm, which induced progressive right sided heart failure with atrial fibrillation. This patient was placed on high dose metoprolol and exceptionally high doses of propylthiouracil without attenuation of the thyrotoxicosis, which progressed to cardiogenic shock resolving with dobutamine. Given this patient persistent thyrotoxic state refractory to medical management, a multi-disciplinary decision to undergo total thyroidectomy was taken. Total thyroidectomy resulted in normalization of the patients' T3 and T4 levels and resolution of heart failure.

Conclusions: Total thyroidectomy can provide effective, definitive treatment for medically refractory thyrotoxicosis with low-output heart failure.

E7. Post-Operative Hematoma Rates of Different Techniques and Technologies in Thyroidectomy: A systematic Review – H.

Javidnia, M. Corsten, Ottawa, ON

Learning Objectives

By the end of this session the audience will have knowledge of the new techniques and technologies in thyroid surgery, the rates of post-operative hematoma for each, as well as how they compare to each-other.

Abstract

Background: Thyroidectomy is one of the most commonly performed procedures world-wide. Hematoma is a potential life-threatening complication of the procedure. Over the years many new techniques and technologies have been developed in attempts to decrease the post-operative morbidity & mortality and operative time of thyroidectomy. These include minimally invasive and endoscopic thyroid surgery, the use of different hemostatic devices, and many more modifications of the procedure.

Purpose: The purpose of this study is to review the literature over the last 50 years to determine if any modifications to the surgical protocol of thyroidectomy have significantly changed the incidence of post-operative hematoma.

Methods: A large systematic review of the literature using multiple databases including Medline, EMBASE, Cochrane Library, and Google Scholar were searched from 1966-2010. The only limitation was articles studying humans. Pooled proportion estimates were used to compare hematoma rates using different techniques and technologies.

Results: The reported incidence of post-thyroidectomy hematoma was between 1 - 1.5 % using all of the different techniques and technologies for thyroidectomy.

Conclusion: While many advances in surgical technique and patient management have been made with thyroidectomy, the rates of post-operative hematoma have remained the same.

E8. Selecting Out Thyroid Nodules that are Benign on Fine Needle Aspiration (FNA) Biopsy for Thyroidectomy based on the McGill Thyroid Nodule Scoring (MTNS) System – C. Li, N. Sands, V. Forest, A. Mylnarek, R. Payne, Montreal, QC

Learning Objectives

By the end of the session, medical students and clinicians will be able to familiarize with the MTNS system in evaluating thyroid nodules, be aware of malignancy despite benign thyroid disease on FNA, and use it as a tool in aiding clinical judgment and guidance for surgical management,

Abstract

Introduction: Inconclusive Fine Needle Aspiration (FNA) biopsy of thyroid is a dilemma. The McGill Thyroid Nodule Score (MTNS) was developed to aid in clinical guidance regarding surgical management.

Objectives: To validate MTNS as a valuable clinical tool in assessing thyroid nodules with benign FNAs.

Methods: A retrospective study at the McGill University Thyroid Cancer Center with chart review of 329 patients over 13 months was conducted. Inclusion criteria were thyroidectomy patients with FNAs showing non-diagnostic results, insufficient sample, or benign disease. Correlations to their assigned MTNS and final pathology results were performed. Statistical analysis was done using Binary Logistic Regression. Benign versus malignant disease in relation to MTNS categorizations: scores 1-3 (group A), 4-8 (group B), and >8 (group C) was compared.

Results: Of the 329 patients, 32 (9.7%) met the inclusion criteria. Final pathology revealed malignancy in 16 (42.1%) subjects, including 7 (18.4%) with micropapillary histology. Patients with MTNS 1-3 had rate of malignancy 37.5% (n=8), MTNS 4-8 had 45.0% (n=20), and MTNS >8 had 75% (n=4).

Conclusion: We assessed the validity of MTNS and confirmed that it is a good predictor of thyroid malignancy in benign nodules on FNA. This will assist the physician when discussing surgery with a patient when the FNA is benign.

E9. Giant Cervical Parathyroid Adenoma Extending to the Aortic Arch: Case Report and Literature Review of Surgical Approach –

S. Shamon, J.E. Young, J. Strychowsky, Vancouver, BC

Learning Objectives

By reviewing this poster, the audience will be able to:

1. Apply the anatomy and embryology of the parathyroid glands in the surgical management of parathyroid adenomas.
2. Consider the published surgical approaches to large parathyroid adenomas in future challenging cases encountered in clinical practice.

Abstract

Objectives: Large parathyroid adenomas constitute a surgical challenge when they extend to the mediastinum where they lie in close proximity to critical anatomic structures. As no standard surgical approach is available, the objective is to consider reported approaches in the literature, and the associated morbidity, when encountering complex large parathyroid cases.

Methods: A case report and review of literature of giant parathyroid adenomas with a focus on cervical adenomas extending to the mediastinum.

Results: Various surgical approaches to access and resect giant parathyroid adenomas were reported in 19 publications, 5 of which extending to the mediastinum. Most of them involve at least a limited sternotomy. In this case, a giant parathyroid adenoma measuring 7 x 3.5 x 2.5 cm extending to the aortic arch, was resected using a minimal cervical incision.

Conclusions: In addition to reported approaches and anatomical considerations, careful intraoperative planning and mobilization of adhesions surrounding large parathyroid adenomas should be pursued to avoid a highly invasive surgical approach.

LARYNGOLOGY

L1. Carcinoma of the Larynx, Metastatic to Ileum, Presents as Ruptured Appendicitis – J. Glicksman, J. Franklin, N. Parry, J. Shepherd, D. Bottoni, London, ON

Learning Objectives

1. To describe a patient who presented with a clinical picture and ultrasound imaging consistent with appendicitis that upon surgery and pathologic analysis was in fact a ruptured squamous cell tumor metastasis of laryngeal origin.
2. To review the literature describing previous cases of laryngeal carcinoma with metastasis to the small bowel

Abstract

Objectives: Metastasis of laryngeal squamous cell carcinoma (SCC) to the intra-abdominal gastrointestinal tract is exceedingly rare. The objectives of this case report are to describe a case involving a perforated metastasis of a laryngeal SCC to the ileum and to review the literature pertaining to other similar cases.

Methods: A review of patient's chart and a review of the English literature involving malignant SCC of the larynx with metastasis to the small bowel.

Results: We describe the case of a 58-year-old man who had failed induction chemotherapy and underwent a laryngopharyngectomy with bilateral neck dissection and pectoralis major flap for a T4N2c laryngeal SCC. Subsequently, the patient was treated with postoperative radiation and cetuximab. The patient went on to present with symptoms consistent with ruptured appendicitis, supported by ultrasound imaging. The patient was taken to the operating room where he was found to have a perforated terminal ileum secondary to SCC metastasis. Review of the English literature failed to demonstrate another case of a laryngeal SCC with a metastatic bowel perforation.

Conclusions: Metastasis of laryngeal SCC to the small bowel with perforation is exceedingly rare, but possible. These patients may be successfully managed with resection.

L2. Prognostic Value of Laryngeal Cartilage Sclerosis Revealed by CT-scan in Patients with Laryngeal Cancer Treated with Radiotherapy — J. Bibeau-Poirier, T. Ayad, S. Moubayed, M. Belair, F. Nguyen, Montreal, QC

Objectifs : Évaluer, de façon rétrospective, la valeur pronostique de la sclérose des cartilages du larynx au CT-scan prétraitement chez les patients atteints de cancer du larynx traités par radiothérapie ou radio-chimiothérapie en terme de contrôle local, succès de préservation de l'organe et de survie.

Méthodologie : Révision des dossiers et des CT-scan prétraitement des patients atteints de cancer du larynx traités par radiothérapie au CHUM entre 2002 et 2007. Présence de sclérose des cartilages au CT-scan corrélée au taux de récurrence locale, laryngectomie de rattrapage et survie pour un suivi allant jusqu'à 5 ans.

Résultats : 111 patients inclus, 76% d'hommes, 24% de femmes, âge moyen de 61 ans, 48 cancers au niveau supra-glottique et 63 au niveau glottique. 7 % avec sclérose du cartilage thyroïde, 5 % avec sclérose du cartilage cricoïde, 55% avec sclérose des cartilages aryénoïdes et 16 % avec sclérose des cartilages aryénoïdes avec tumeur adjacente. Aucune différence significative n'a été démontrée entre les paramètres radiologiques et le taux de récurrence locale, de laryngectomie totale et de survie.

Conclusions : À la lumière de cette étude, la sclérose des cartilages du larynx ne peut être identifiée comme facteur de risque d'échec thérapeutique. Les résultats nous confortent dans notre attitude thérapeutique actuelle dans les cas de cancer du larynx avec sclérose des cartilages.

OTOLOGY / COCHLEAR IMPLANTS

01. Cochlear Implant and Thiamine-Responsive Megaloblastic Anemia (TRMA) Syndrome – A. Hagr, Riyadh, S.A.

Learning Objectives

By the end of this session the reader will be able to:

1. Know the triad of TRMA syndrome.
2. Cochlear implantation can be undertaken successfully in patients with TRMA syndrome if it leads to profound deafness.
3. Appreciate the difficulties in making decision for cochlear implant in similar cases.

Abstract

Objective: To report first case of thiamine-responsive megaloblastic anemia (TRMA) syndrome who had successful cochlear implant

Method: Case report

Result: A four-year-old boy who presented with the typical triad of the thiamine-responsive megaloblastic anemia syndrome (TRMA) who did not improve with hearing aids and did very well with cochlear implant.

Conclusion: Cochlear implantation can be undertaken successfully in patients with TRMA syndrome if it leads to profound deafness.

02. Progressive Sensorineural Hearing Loss and Ataxia in Superficial Siderosis: A Case Report and Literature Review – J. Mercer, T. Smith, K. Burrage, St. John's, NL

Learning Objectives

1. By the end of this poster session the attendees will be able to describe the unique combination of signs and symptoms of superficial siderosis when presented with a case of this rare condition.
2. By the end of this poster session the attendees will be able to evaluate a case of superficial siderosis in terms of the necessary diagnostic steps when presented with this rare condition.
3. By the end of this poster session the attendees will be able to consider all of the available treatment options when presented with a case of superficial siderosis.

Abstract

A 57 year old patient presented with mild, bilateral sensorineural hearing loss and right otalgia. Follow-up revealed right-sided tinnitus, episodic positional vertigo and increased right-sided hearing loss that was demonstrated by serial Audiogram and Auditory Brainstem Response Audiometry. An urgent CT scan showed no evidence of intracranial hemorrhage or any mass lesion. Likewise, MRI of the head and internal auditory canal did not reveal any pathology. The asymmetric sensorineural hearing loss continued to progress and debilitating ataxia developed. A second MRI revealed diffuse linear hypointensity on T2-weighted series, which in this clinical setting is consistent with the diagnosis of superficial siderosis. This rare condition is associated with the deposition of hemosiderin on the vestibulocochlear nerve, which can occur as blood from a chronic sub-arachnoid hemorrhage is metabolized. In terms of treatment, Magnetic Resonance Angiography to identify the source of the hemorrhage is pending and will be completed by November 2010. Furthermore, the patient has been assessed regarding cochlear implant to circumvent the asymmetric hearing loss. The available Otolaryngology and Neurosurgery literature on superficial siderosis will be reviewed and discussed in the context of this case.

03. Bilateral Spontaneous Hemotympanum Secondary to Chemotherapy-Induced Thrombocytopenia: A Case Report – P. Wong, A. Ho, C. Xu, Edmonton, AB

Learning Objectives

1. Discuss the presentation of a case of bilateral spontaneous hemotympanum.
2. Describe the known pathophysiology and etiology of spontaneous hemotympanum.
3. Describe the management and outcomes in this unique case.

Abstract

Objective: To present a case of spontaneous, bilateral hemotympanum secondary to chemotherapy-induced thrombocytopenia.

Methods: Case report and review of the literature.

Results: Bilateral, spontaneous hemotympanum is an exceedingly rare event. We present a case of non-traumatic bilateral hemotympanum secondary to chemotherapy-induced thrombocytopenia in a patient with acute myelogenous leukemia. A small, left-sided subdural hematoma was also present in this patient. No extra-aural sources of bleeding to explain the bilateral hemotympanum were identified. Full resolution of symptoms was achieved with conservative management.

Conclusion: Bilateral spontaneous hemotympanum is a rare complication of thrombocytopenia and can be treated conservatively.

04. Skull Osteoma at the Site of Cochlear Implant: A Novel Complication of Cochlear Implant Surgery – S. Hugh, T. Uwiera, Toronto, ON

Learning Objectives

1. By the end of the session the otolaryngologist will be able to describe delayed complications of cochlear implantation.
2. By the end of the session the otolaryngologist will be able to value the unique delayed post-operative complication of a symptomatic skull osteoma at the cochlear implant site.
3. By the end of the session the otolaryngologist will be able to consider unusual causes of discomfort at the surgical site years after cochlear implantation.

Abstract

Cochlear implantation (CI) in the pediatric population is completed in cases of bilateral profound sensorineural hearing loss as a means of auditory rehabilitation. In experienced hands, surgical complication rates are low. Well recognized delayed post-operative complications include wound breakdown, hematoma, device failure and device extrusion. Osteomas, a commonly occurring benign osteogenic neoplasm of the skull, have not previously been reported as a late complication of CI. Typically, osteomas occur on cranial and facial bones, with most cases arising in the paranasal sinuses and bones of the jaw. Surgical intervention is rarely necessary since cranial osteomas are rarely symptomatic. We present the case of a sixteen year old male with idiopathic congenital sensorineural hearing loss who underwent unilateral CI at age three. Ten years later he developed a symptomatic bony mass anterior to the implanted device. This continued to expand and resulted in significant discomfort and restricted activity prompting surgical excision. This is the first of case of a symptomatic skull osteoma at the site of a CI to be described in the literature as a late post-operative complication of CI surgery.

05. Surgical Treatment of Pulsatile Tinnitus Using Acellular Dermis – M. Shakeel, A. Hussain, S. Gray, G. Elofuke, C. Brewis, Aberdeen, Scotland

Learning Objectives

To learn about pulsatile tinnitus, its presentation, associated symptoms, investigation, treatment options including surgical intervention. Also introduce a relatively new use of acellular dermis for an old challenging problem.

Abstract

Objectives: To share our experience of successful management of pulsatile tinnitus (PT) with acellular dermis.

Methods: Case report and literature review

Results: A 23 year old Caucasian female presented with right-sided PT of 9 months duration. All clinical and audiological investigations were normal. The magnetic resonance imaging (MRI) of the brain and internal auditory canals was normal but the computerized scan (CT) showed a high right jugular bulb. It also showed dehiscence of right sigmoid plate with herniation of sigmoid

sinus into the mastoid. She underwent transmastoid correction of the dehiscence of sigmoid sinus and jugular bulb. Acellular dermis was used for extraluminal packing of mastoid cavity and hypotympanum along with surgicel. The patient made good post-operative recovery and reported resolution of tinnitus on recovering from anaesthesia. The patient was discharged home the following day. There were no sequelae from surgery. The patient remained symptom free at 9 months follow-up.

Conclusions: The correction of dehiscent sigmoid sinus and jugular bulb can be accomplished with a pliable material like acellular dermis. Traditional recommendation is to provide rigid correction of herniated sinus; however, we have demonstrated that a relatively thick pliable acellular dermis is more than adequate to correct herniation.

06. Re-examining Age Cutoffs: Sequential Bilateral Cochlear Implants in Older Children – P. Moore, T. Batten, P. O'Reilly, J. Ryan, St. John's, NL

Learning Objectives

- Audience members should be knowledgeable in current evidence for contralateral implantation of older children and adolescents.
- Audience members will be able to apply this information to reevaluate age selection at other cochlear implant centres.

Abstract

In recent years, bilateral cochlear implantation (BCI) has become widely accepted medical therapy for appropriately selected patients with hearing loss, surpassing unilateral implantation in measures such as speech recognition and sound localization. Although there is a trend toward simultaneous bilateral implantation in young BCI candidates, sequentially implanted children make up 50% of all BCI users. Given the widespread funding challenges surrounding BCI, research has been heavily focused on generating criteria for selecting the best candidates for contralateral implantation. Some of the most influential research in this area has emphasized age of second implantation, and time between implants, as reliable prognostic factors.

Most recently, research has surfaced demonstrating benefits in BCI users receiving their second implant in late childhood or adolescence. Here, we examine a group of 8 older children (mean 10.8 years old +/- 3.6) with an average of 7.7 years (+/- 2.2) between implants. The progress they have demonstrated with their second implant, combined with existing evidence for contralateral implantation in older children and adolescents, urges us to reexamine current ideas about suitable candidates for this procedure. While funding limitations necessitate some form of selection criteria, it is becoming increasingly evident that age at second implantation and time between implants may have less bearing on prognosis than originally thought.

07. Positron Emission Tomography and Malignant Otitis Externa – M. Shakeel, A. Hussain, X. Hafeez, B. Ram, D. McAteer, Aberdeen, Scotland

Learning Objectives

- Describe a case of malignant otitis externa with cranial neuropathies.
- Discuss radiological diagnosis.
- Discuss role of PET scan in management decisions.

Abstract

Objectives: We describe an atypical case of malignant otitis externa (MOE). Clinical and standard CT scan findings were regarded inadequate to make a definitive diagnosis. We discuss the complementary but important role of PET CT to confirm the diagnosis in the presence of equivocal finding on standard skull base CT scan.

Methods: Case report with literature review.

Results: Sixty year old male presented with deep seated otalgia. Clinical findings were equivocal. He had ipsilateral hypoglossal palsy. CT scan showed opacification of the middle ear cleft. The differential included middle ear neoplasm, skull base osteomyelitis and malignant otitis externa. The PET CT showed widespread uptake of the ipsilateral skull base which led to the diagnosis of MOE. Patient was treated with 10 days of intravenous ciprofloxacin followed by oral treatment totalling 6 weeks. The pain improved with IV treatment and on review at 8 weeks revealed complete resolution of pain and hypoglossal palsy.

Conclusions: Standard clinical or radiological parameters may not always be adequate to make a definitive diagnosis of MOE. In such setting, we advocate use of PET CT as a complementary investigation to clinch the diagnosis.

RHINOLOGY / SINUS DISEASE

R1. Frontal Sinus Cholesteatoma: A Rare But Important Clinical Entity to Remember – M. Shakeel, B. Ram, J. Yeo, X. Hafeez, A. Chapman, Aberdeen, Scotland

Learning Objectives

To introduce frontal sinus cholesteatoma as an important differential diagnosis for a space occupying lesion of the frontal sinus.
To discuss the clinical presentation and successful management of this rare condition.
To present a brief review of the relevant literature on this topic.

Abstract

Objectives: To discuss the clinical presentation, investigations and successful management of frontal sinus cholesteatoma.

Methods: Case report and literature review.

Results: A 26 year old Caucasian female, otherwise fit and healthy, presented with a 4-month history of swollen right eye associated with reduced visual acuity. Ophthalmological examination revealed right sided proptosis, diplopia and reduced visual acuity. The colour vision was normal and there was no afferent papillary defect. On nasendoscopy, the nasal cavity was unremarkable apart from some fullness at the area of the right uncinat process. Computerized tomography scan identified a space occupying lesion in the right frontal sinus eroding through the orbital roof and displacing the right globe. There was also extensive bony erosion through the inner table.

The patient underwent right sided endoscopic sinus surgery and fronto-ethmoidectomy via an external approach. Intra-operatively, the right frontal sinus was found to be full of keratin. Histological examination showed sheets of keratinous debris. She made a good post-operative recovery and remained disease free at 18 months follow-up.

Conclusions: Frontal sinus cholesteatoma is a rare condition but should be included in the differential diagnosis of a slowly expanding lesion occurring in the frontal sinus.

R2. Prospective Evaluation of Preoperative Concern Amongst Patients Considering Endoscopic Sinus Surgery: Normative Data – J. Yeung, B. Rotenberg, M. Brandt, P. Doyle, J. Franklin, London, ON

By the end of this presentation, the participant will understand the the general perioperative concerns of patients undergoing endoscopic sinus surgery (ESS). They will also have an appreciation for the use of the Western Surgical Concern Inventory - ESS and its role in addressing perioperative concerns prior to ESS.

Abstract

Background: Endoscopic sinus surgery (ESS) is a contemporary technique used to treat patients with chronic rhinosinusitis and these patients may face many unique uncertainties and concerns regarding surgery. This study aimed to identify patients' greatest areas of concern in order to ameliorate and guide pre-operative counseling.

Methods: All patients eligible for ESS were voluntarily recruited into this study. Risks and benefits of ESS were discussed with the patients as part of the process of obtaining informed consent, after which patients completed a previously validated 19-item questionnaire designed to assess perioperative concerns of ESS. Outcome measures included descriptive statistics and normative data.

Results: Patients generally had few concerns regarding surgery despite significant individual variation. The areas of greatest concern included risks of post-operative epistaxis, the need for revision surgery, general anesthesia, and the use of nasal packing post-operatively. They had fewest concerns regarding feeling embarrassed, depressed, and judged, or not having their questions answered appropriately.

Conclusion: This study serves to characterize the perioperative concerns faced by patients considering ESS. Normative data obtained from surveying these patients reveals a generally small degree of concern regarding complications of ESS, though individual responses varied. Our findings support the need to recognize the anxieties of specific patients and

R3. Eosinophilic Angiocentric Fibrosis : Case Report and Review of Literature – S. Lachance, S. Nadeau, Québec, QC

Learning Objectives

1. Learn about eosinophilic angiocentric fibrosis and its clinical presentation.

2. Recognize the key characteristics associated with the disease.

Abstract

Eosinophilic angiocentric fibrosis is a rare entity presenting to the otolaryngologist. We report the cases of two patients with eosinophilic angiocentric fibrosis seen between September 2007 and January 2010. A 23 year-old male presented with unusual nasal ulcerations and a 61 year-old woman presented with an intranasal mass and nasal obstruction. Patients were both investigated and subsequently treated surgically. A total of 38 cases have been reported, including ours. The majority of these patients had nasal involvement by EAF. Only six had documented allergies. About a quarter of all patients had skin involvement either by EAF or a granuloma faciale, thought to be in the same spectrum of disease. Over two-thirds of patients were treated surgically. Other reported treatments include oral and intra-lesional steroids, dapsone and azathioprine. The majority of EAF cases occur in the nasal cavity and the most frequent presentation is nasal obstruction. EAF and granuloma faciale seem to share a common aetiology or pathologic process. There are no specific biologic markers for diagnosis of EAF. Surgical treatment seems to be the first choice and complete resection might prevent recurrence.

R4. My Nose is Right-Handed: A Case Report – M. Bussieres, M. Gervais, J. Chenard, Sherbrooke, QC

Learning Objectives

- Discuss briefly the principal causes of anosmia.
- Introduce the reader to much rarer congenital etiologies for anosmia.
- Appreciate the role of magnetic resonance imaging in the investigation of anosmia of unknown cause.

Abstract

Hyposmia and anosmia are found most frequently after an upper respiratory tract infection, a head trauma or concomitantly with obstructive nasal or sinus disease. Rarely, a genetic or congenital cause can be uncovered, but this usually occurs during childhood. The best-known syndrome is the one described by Kallman in 1944, associating anosmia to hypogonadotropic hypogonadism. In the literature, there are at least two other cases reported of non-syndromic unilateral olfactory tract agenesis. However, to our knowledge, this is the first time a congenital cause is diagnosed in a living adult patient. This might be related to the subtlety of the clinical presentation, knowing that the subject still have one intact olfactory tract. In this case, magnetic resonance imaging rapidly led to the diagnosis.

R5. Sociological Determinants of Health Involved in the Presentation and Management of a Neglected Basaloid Squamous Cell Carcinoma of the Sinonasal Cavity with Proptosis of the Globe – D. Pahwa, P. Spafford, N. Sharma, A. Sharma, Saskatoon, SK

Learning Objectives

By the end of this presentation the conference participants will be able to respect how physicians may be unable to prevent adverse medical or surgical outcomes even with current technological advances in diagnosing and treating head and neck cancers. By the end of this presentation the conference participants will be able to value how the inequalities in health care access by low socioeconomic status patients can lead to undesirable prognoses and impediment in care

By the end of this presentation the conference participants will be able to appreciate how uncommon a finding of a basaloid squamous cell carcinoma presenting in the sinonasal cavity is in the area of head and neck surgery and oncology.

Abstract

Objective: To report an interesting case of a 50-year-old woman presenting with basal squamous cell carcinoma (BSCC) of the sinonasal cavity causing visual disturbances and to illustrate the social determinants of health inequalities within the Canadian health care system.

Background: BSCC is an uncommon tumor in the sinonasal cavity with less than 30 reported cases in the literature. In Canada, the management of BSCC is determined upon the extent of disease, severity of symptoms, and timely access to specialist services. The Canada Health Act developed in 1984 was primarily implemented to protect citizens of lower incomes in providing all Canadians with equal access to health care services. Nevertheless, low-income Canadians continue to be 50% less likely to seek a specialist and have 40-50% increased delays in accessing appropriate medical services.

Clinical Case: A 50 year-old female, of poor socioeconomic status, presented with a large left sinonasal mass with associated visual disturbances. CT scan and biopsy determined a large poorly differentiated BSCC within the left maxillary sinus with bilateral orbital invasion. Delays in diagnosis were largely attributed to barriers in accessing specialized health care services ultimately leading to her tumor being inoperable.

Conclusions: Inequities in accessing specialized health care services in Canada directly effects the management of patients with advanced head and neck cancers.

R6. Does Turbinate Size Impacts on Sleep Related Breathing Disorders? – V. I. Forest, P. Lavigne, A. Benedetti, F. Lavigne, Montreal, QC

Learning Objectives

1. Learn a new technique to examine the tail of the turbinate at the level of the choana.
2. Determine if an association exists between the size of the turbinates and parameters used to diagnose sleep breathing disorders, including obstructive sleep apnea.

Abstract

Objective: To describe a technique, the trans-oral nasopharyngoscopy (TON), to evaluate the size of the tail of turbinates and to determine if an association exists between turbinate size and the various parameters used in the diagnosis of sleep related breathing disorders (SBD).

Methods: Thirty-six patients with SBD were included and completed an Epworth Sleepiness Scale (ESS) and a Quebec Sleep Questionnaire (QSQ). They underwent a head and neck examination, allergy skin tests, full night polysomnography, and a TON using a flexible laryngoscope. The size of the turbinate was divided into two groups: grade I is a turbinate obstructing < 1/2 of the horizontal diameter of the choana and grade II is a turbinate obstructing > 1/2 of the choana.

Results: Sixteen patients were grade I and 20 patients were grade II. Turbinate size at the choana did not show any statistical significant association with nasal congestion, allergies, ESS and QSQ scores. Among the PSG parameters analyzed, no association was found with the apnea-hypopnea index (AHI), but the size of the turbinate showed a positive correlation with respiratory event related arousals (RERA; $p=0,03$). Total sleep time spent snoring showed a weak association with turbinate size.

Conclusion: TON is a simple technique allowing the evaluation of the size of the tail of the turbinates. Size of the turbinates was associated with RERA and total sleep time spent snoring, but not with AHI.

R7. Ostiomeatal Complex Obstruction is not Associated with the Development of Chronic Rhinosinusitis with Nasal Polyps – R. Leung, R. Chandra, R. Kerri, D. Conley, Chicago, IL

Learning Objectives

By the end of this session, the practicing otolaryngologist will be able:

- To discuss the role of ostiomeatal complex obstruction in chronic sinusitis.
- To understand the anatomy of the ostiomeatal complex and its adjacent sinuses.
- To approach the surgical treatment of chronic sinusitis with nasal polyps differently than chronic sinusitis without nasal polyps.

Abstract

Objective: Current thinking suggests that obstruction of the ostiomeatal complex (OMC) disease is linked to the development of chronic rhinosinusitis (CRS). This study aims to identify whether an association exists between OMC obstruction and inflammation of the adjacent sinuses.

Method: CT scans of 144 CRS without polyps (CRSsP) patients and 123 CRS with nasal polyps (CRSwP) patients were evaluated for involvement of the OMC and its associated sinuses.

Results: In CRSsP patients, there was a statistically significant association ($p<<0.0001$) between disease in the OMC and disease in the ipsilateral maxillary, anterior ethmoid, and frontal sinuses. Meanwhile in CRSwP, ipsilateral OMC opacification was not statistically significantly associated ($p>0.3$) with disease in the ipsilateral maxillary, anterior ethmoid, or frontal sinuses.

Conclusion: In CRSwP, paranasal sinus inflammation cannot be classified as a post-obstructive phenomenon. These findings question the role of procedures that merely dilate sinus ostia without resection of disease in CRSwP cases.

R8. Transnasal Endoscopic (TE) Versus Microscopic Resection of Pituitary Pathology: Retrospective Comparative Review – M. Shakeel, A. Hussain, M. Kamel, Aberdeen, Scotland

Learning Objectives

- Review the two techniques.
- Compare the complication rates.
- Compare the surgical outcome.

Abstract

Objectives: To compare the modern TE resection of pituitary pathology with standard trans nasal microscopic resection (TM). Comparatively examine the pros and cons of two techniques and review the outcome.

Methods: Retrospective chart review was conducted of TE over a period of one year which was compared with a cohort of patients managed previously with standard TM resection in the same institution. Data collected included demographics, indications, pathology, intraoperative complications, completeness of resection, postoperative complications, hormonal outcome and long term control.

Results: Fifty patients were included in the review with 25 in each group. There were more females than males and the mean age was 45 years. Reconstructive techniques were also compared. In our review the outcome appears to be better in the TE group. It was felt Endoscopic approach seems to offer direct, precise and minimally invasive access. There does not appear to be any significant complication related to resection of the posterior septum in four hand approach.

Conclusion: In this retrospective comparative review of two techniques the outcome appears to be better in the more modern TE group. We will describe the advantages and disadvantages of the two techniques and advocate the TE as the preferred technique.

R9. Endoscopic Pharyngeal Diverticulotomy (EPD): 12 Year Experience at a Teaching Hospital – G. Elofuke, A. Hussain, M. Shakeel, J. Yeo, K.W. Ah-See, Aberdeen, Scotland

Learning Objectives

- To learn about the presentation, investigations and management of pharyngeal pouch.
- To share our experience of pharyngeal pouch stapling.

Abstract

Objectives: To analyze our experience and assess the outcome of EPD

Methods: Patients who underwent Endoscopic stapling technique were included in the study. Patients were identified from the operating log book and retrospective chart review was conducted to collect data. Data collected included demographics, radiological sizing, completion of procedure, hospital stay and complications.

Results: Total of 85 patients were identified between 1998 and 2010. Ten patients were excluded. Study population consisted of 75 patients. There 30 females and 45 males with a mean age of 73 year (range 50-90). Diagnosis was made on Barium Swallow. Seventy three patients underwent successful EPD. In 2 patients procedure could not be completed. In 72 patients the procedure was completed successfully without any intraoperative complications. One patient had pharyngeal perforation. The average duration of stay was 2.6 days (range 0-11 days). All patients were given oral fluids on return to the ward after surgery. Thirty procedures were carried out by the trainees; the remaining 45 procedures were carried out by the consultant surgeon. Five patients developed recurrence of pouch over a variable time and were retreated with EPD.

Conclusions: Our experience supports the validity of EDP. It appears to be safe and effective.

GENERAL OTOLARYNGOLOGY

G1. Tophus Gout of the Nose Presenting as Dorsal Nasal Hump - H. Zhang, J.D. Bosch, S. Walen, Calgary, AB

Learning Objectives

1. To review the different presentations of gout.
2. To discuss the difficulties in differentiating nasal gout and a nasal dermoid cyst.
3. To discuss possible management options for chronic gout.

Abstract

Objectives: To present a rare case of nasal gout with its management options.

Case Report: We present a case of a 34-year-old man with two year history of a painless, progressively enlarging mass in the dorsum of his nose. Past medical history includes gouty arthritis involving the distal joints. A diagnosis of epidermoid cyst was made with preoperative clinical examination and CT scan of the sinuses. However, postoperative pathology revealed the mass to be tophus gout of the nose.

Outcome: Surgical resection of the mass was completed with external rhinotomy. Lack of extension under the nasal bones allowed complete removal by subperichondrial dissection. One month postoperative follow-up revealed that the wound has healed nicely and the patient is very pleased with the results. The current plan for the patient, given that he is at risk for further deposits, is referral to a rheumatologist for further assessment and management.

Conclusion: Tophus gout deposits in the nose are a very rare occurrence with only a few case reports in the literature. Given the rarity, treatment options as well as factors relating to the deposits of gout within the nose and other head and neck soft tissues remains a topic of interest.

G2. Recognizing Longis Collis Tendonitis – A. Esmail, J. Chau, Winnipeg, MB

Learning Objectives

- 1) The Reader will become aware of Calcific Tendonitis of the the Longis Collis and how it typically presents.
- 2) The Reader will be able to diagnose Longis Colli tendonitis and differentiate its radiologic appearance from that of a retropharyngeal abscess.

Abstract

Background: Only two cases of Longis Collis tendonitis have been described in the otolaryngology literature.

- Objectives:**
- 1) To present a case of Calcific longis collis tendonitis (LCT) that ocured at the HSC in Winnipeg Canada.
 - 2) A literature review for longis colli tendonitis.
 - 3) Present the typical findings and treatments of LCT.

Methods: This was a case study. The chart was reviewed for clinical and Radiological findings. A literature search was done using PubMed.

Results: The Radiological findings of Longis Colis Tendonitis are often an amorphous calcification of the muscle with a small non-enhancing retropharyngeal effusion. It presents with a Typical presentation of acute to subacute onset of neck pain, dysphagia, or odynophagia; mildly elevated WBC count; and low-grade fever.

Conclusion: Longus Collis Tendonitis can easliy be misdiagnosed as a retropharyngeal abcess as it initially was in this case. To avoid unnecessary antibiotics or surgery the presence of a non-enhancing retropharyngeal effusion with pathenemonic calcification of the longis collis muscle should be treated with anit-inflamitory medications.

G3. Assessing Oral-Health Related Quality of Life Following Treatment for Oral Cancer – P. Doyle, K. Fung, P. Petrou, L. Holdsworth, C. Guiltinan, J. Franklin, A. Nichols, London, ON

Learning Objectives

1. By the end of this session, head and neck surgeons will be able to assess the utility of a time-efficient clinical questionnaire to evaluate functional limitations in oral health in those treated for oral cancer.
2. By the end of this session, head and neck surgeons will be able to identify oral-health related problems that create disability in those treated for oral cancer, but which may not be identified using other quality of life measures.

Abstract

Objectives: To assess oral-health related quality of life in a group of adult participants who had been diagnosed with and treated for oral cancer.

Methods: Forty adults served as participants for the study; a group of 40 adult controls was also evaluated. All participants completed a validated 14-item questionnaire, the Oral Health Impact Profile (OHIP-14). The OHIP-14 addresses a broad range of oral health factors that cross physical, psychological, and social domains of oral functioning. Descriptive data were gathered and compared to controls.

Results: As anticipated, participants treated for oral cancer exhibit a range of oral-health related functional deficits that are significantly different from those of age matched peers. However, the deficits identified using the OHIP-14 are unlikely to be captured via other measures of "quality of life" (QOL) that may be employed with this clinical population (e.g., EORTC QOL instruments).

Conclusions: Findings indicate that the OHIP-14 can be used to document specific oral health issues that may arise from oral cancer and its treatment. While a range of functional limitations was exhibited, collectively, these data suggest that efforts to identify oral-health related disability in those treated for oral cancer may permit enhanced post-treatment care.

G4. Work Environment and Condition Associated Discomfort and Injury: An Ergonomics Survey Study of the American Society of Pediatric Otolaryngology Members – J. Cavanagh, D. Kearns, M. Brake, H. Amoodi, P. Hong, Halifax, NS

Learning Objectives

By viewing the poster the reader will be able to:

- describe the reported incidence of work associated pain and discomfort among pediatric otolaryngology surgeons.
- recognize specific otolaryngology pediatric surgeries which are associated with reported work related pain and discomfort
- describe ergonomic rehabilitation commonly reported by pediatric otolaryngology surgeons.

Abstract

Objective: To examine work related discomfort and injury among pediatric otolaryngologists and their knowledge of work-place ergonomics.

Method: We surveyed 362 members of the American Society of Pediatric Otolaryngology. Our main outcomes were whether the physician had ever experienced discomfort or physical symptoms that they attributed to their surgical practice.

Results: Among the 108 respondents (response rate 29.8%), 62 (62.0%) reported experiencing pain or discomfort that they attributed to their surgical practice. Fifty-two (85.2%) reported experiencing pain, 37 (60.7%) reported experiencing stiffness, 30 (49.2%) reported experiencing fatigue, and 17 (27.9%) reported experiencing numbness related. The majority of responders (58.3%) had received treatment; of those who received treatment, 27 (77.1%) believed therapy had improved their symptoms, although 23 (63.9%) believed their condition had not been remedied. There were no significant differences found among male and female surgeons, length of time in practice, academic versus community setting or number of surgeries completed by the surgeon. We discovered that a minority of surgeons (28.7%), were aware of ergonomic principles and, of those who were aware, 83.9% had implemented ergonomic principles into their surgical practice.

Conclusion: Almost two-thirds of surgeons surveyed reported experiencing pain or discomfort that they attributed to their surgical practice. Only a minority of respondents were aware of

G5. Electroporation Therapy: Reexamining a Lost Treatment Modality – J. Bastian, P. Spafford, Saskatoon, SK

Learning Objectives

By the end of the poster presentation, a general Otolaryngologist will be able to describe the physiology, efficacy, and safety of Electroporation Therapy (EPT) with bleomycin and compare the advantages and disadvantages of this treatment modality to other treatments for H&N cancers.

Abstract

Objective: To display and explain the physiology of Electroporation Therapy (EPT) with bleomycin and to discuss the efficacy and safety of this lost treatment modality on Head and Neck (H&N) cancers by reviewing previous EPT studies and investigating the drug trials.

Methods: A literature review of past EPT studies, dating back to 1991, was performed. Major studies involving EPT performed on H&N cancers were included. The rates of complete and partial remissions were recorded, averaged, and displayed.

Results: Of the 7 trials included, the complete and partial response rates were found to be 67.25% and 95% respectively. EPT with bleomycin is an effective treatment for small H&N cancers with similar efficacy to the current standard of treatment, surgical resection. Established advantages of EPT and bleomycin include: the ability to treat spectrum of tumour types, simplicity in administering, limited side effects, and tissue preservation.

Conclusion: EPT has shown to be an efficacious treatment modality for H&N cancer, yet its current use is almost exclusive to palliative care. Although the benefits of EPT as a readily available treatment option are extensive, the lack of broad use as a cancer therapy is limited by a lack of monetary funding and political support.

G6. Atypical Presentations of Achalasia: 2 Cases of Airway Compromise – M. Roskies, S. Daniel, D. Zielinski, Montreal, QC

Learning Objectives

By the end of this session the healthcare professional in the field of otolaryngology should be able to:

1. understand the pathophysiology of achalasia;
2. recognize the common presenting symptoms of achalasia;
3. consider atypical presentations of achalasia related to airway compromise;
4. understand the importance of recognizing atypical presentations of achalasia when presented with two cases of airway compromise seen in the pediatric population.

Abstract

Achalasia is characterized by incomplete lower esophageal sphincter relaxation and as such, typically presents in patients as dysphagia and regurgitation. While there have been few reports of adults with achalasia first presenting with symptoms of airway obstruction, the literature is devoid of this atypical presentation in the pediatric population. We report 2 such cases.

The first is an 11-year-old boy with a two-year history of nocturnal cough and dyspnea on exertion. Initially diagnosed with bronchitis, a chest x-ray revealed the proximal esophagus distended by air and a CT chest showed flattening of the posterior trachea. It was later elicited that this patient experienced dysphagia 2 years prior. After undergoing Heller myotomy, this patient's symptoms and pulmonary function tests resolved.

The second case is that of a 16-year-old boy from Romania with a one-year history of nocturnal cough associated with nausea, vomiting, chills and fevers. After infectious disease was ruled out, pulmonary function tests suggested a fixed central airway obstruction. Like the first case, CT chest was key in the diagnosis, showing a dilated esophagus (>4 cm) and over 50% stenosis of the trachea. The patient is currently awaiting surgical correction of his achalasia.

These cases illustrate two atypical respiratory presentations of achalasia resulting from esophageal compression of the trachea. They highlight the need for timely diagnosis to avoid progressive airway compromise.

G7. Incidence, Epidemiology, Bacteriology and Post-Discharge Course of Peritonsillar Abscesses in London, Ontario – L. Sowerby, M. Husein, London, ON

Learning Objectives

At the conclusion of this presentation participants will:

1. Have an appreciation for epidemiology of peritonsillar abscesses and resistance patterns emerging in London, Ontario.
2. Have an idea of the variation in presentation of patients with a peritonsillar abscess.
3. Have an understanding for the course of recovery after outpatient drainage of peritonsillar abscesses.

Abstract

Objectives: Peritonsillar abscesses are the second most common emergency room consultation for Otolaryngology. Recent epidemiological data from the USA has demonstrated emerging resistance patterns; no similar studies have been carried out in Canada. There is also little to no data in the literature regarding the post-discharge course of treated patients.

Methods: A prospective observational study was carried out from February 2009 to January 2010 of all patients presenting to the ED in London, ON with an aspiration-positive peritonsillar abscess. Culture results and demographic data was collected. A follow-up telephone survey was carried out after 2-3 weeks.

Results: A total of 60 patients were diagnosed with an abscess; 46 patients were enrolled. The average duration of symptoms was 6 days with 51% currently being treated with antibiotics. An average of 4mL of pus was obtained and 15% required admission. Clindamycin was prescribed to 69% of patients. Group A Strep and Strep Anginosus were present in 56% of isolates. 7/22 (32%) of specimens demonstrated resistance to clindamycin. 38 patients had follow-up - 77% of patients reported a return to solid food within 3 days, and 75% reported no pain by 5 days. Pain medication was stopped by day 3 for 53% of patients and resolution of trismus took longer than a week for 43% of patients.

Conclusions: Clindamycin resistance was identified in a third of Strep isolates. Patients recover quickly from outpatient drainage.

G8. Cranial Fasciitis: A Rare Non-Neoplastic Lesion of the Cranium Case Report, 15 Year Follow Up and Review of the Literature – M. Lecavalier, F. Kozak, Vancouver, BC

Learning Objectives

1. To review Cranial Fasciitis a rare non-neoplastic lesion of the cranium.
2. To review the differential diagnosis of this condition.

Abstract

Objective: To review cranial fasciitis (CF), a rare non-neoplastic lesion of the cranium.

Design: Case report, long term follow up and review of the literature.

Case presentation: We present a case of CF with intracranial involvement and associated otologic symptoms in a four year old boy followed up 15 years later. Surgical, histological, immunohistochemical and radiological findings are presented.

Conclusions: CF is a rapid growing myofibroblastic lesion of the cranium in children. Although imaging aids in the diagnosis of CF, histological studies are necessary to confirm the diagnosis. Lesions do not tend to recur following surgical excision with curettage of the underlying bone. Although a rare non-neoplastic lesion of the cranium in children, CF may initially present to the otolaryngologist, however, this type of presentation is uncommon. It is important to include CF in the differential diagnosis of all lytic and non-lytic skull lesions in children.

G9. 3D Surgical Planning in Prefabricated Fibular Free Flap – J. Yu, H. Seikaly, J. Wolfaardt, Edmonton, AB

Abstract

Objective: Demonstrate the feasibility of 3-dimensional (3D) virtual planning in prefabricated a fibular free flap for an oral cavity defect reconstruction.

Methods: This is a case report of using virtual planning as a technique of prefabricating a fibular free flap for the purpose of reconstructing a maxillary defect. Virtual planning was used to determine the position of the implants, the position of the fibula, osteotomies of the fibula, and points of fixation. Prefabrication of the fibula was performed using a template to drill the implants, and peri-implant skin grafting. 6 weeks later, in a single stage procedure, the fibular free flap was raised, and osteotomies performed as per preoperative planning. It was then inset into the maxillary defect and positioned using a dental prosthesis to achieve occlusion. The patient was allowed to heal with the dental prosthesis maintaining the position of the new maxilla. Three months later, the implants were loaded allowing for complete dental rehabilitation.

Results: The patient had successfully recovered from surgery with free flap success. The implants were loaded 2 months post op achieving excellent occlusion demonstrating the accuracy of the 3D surgical planning.

Conclusions: This is a report of using 3D surgical planning to determine, site of implants, and planning of osteotomies in a prefabricated fibular free flap.

G10. Does Smoking Cause Otitis Media? A Meta-Analysis – Z. Dewji, B. Wu, B. Blakley, Winnipeg, MB

Abstract

Objective: To conduct a meta-analysis of the conflicting studies portraying a cause-and-effect relationship between smoking and otitis media.

Methods: A meta-analysis was performed searching the PubMed MEDLINE database. All authors agreed with the inclusion criteria which included any human studies regardless of age, gender, ethnicity, language or date that studied otitis media or provided objective evidence of middle ear dysfunction with smokers, non-smokers, affected and control groups. In addition, we excluded any opinion or editorial based content, and any studies that included prior ear surgery.

Results: 13 studies met inclusion criteria. The overall odds ratio (and 95% CI limits) were 0.411 (0.391-0.431). These results favored non-smokers ($p < 0.001$) indicating that smoking is not associated with middle ear disease. The funnel plot suggested that considerable publication bias is present in the literature

Conclusions: The results suggest that there is no positive association between smoking and otitis media.

Note: More studies may be added as they become available.

G11. Conjunctival Squamous Cell Carcinoma in Nova Scotia: a Twenty Year Review – J. Trites, D. Thomas, J. G. Heathcote, C. Seamone, R. Hart, S.M. Taylor, Halifax, NS

Learning Objectives

1. By the end of the session, a conference participant will be able to state the general epidemiology of conjunctival squamous cell carcinoma (CSCC) and differences observed in Nova Scotia, with a focus on those cases that present to ORL-HNS services.
2. By the end of the session, a conference participant will be able to describe general recommendations for management of CSCC including staging, surgery and available adjuvant therapies

Abstract

Objectives: To report the experience of a single regional cancer centre with Conjunctival Squamous Cell Carcinoma (CSCC) over a twenty-year period and to compare diagnostic criteria, treatment, and outcomes with current literature.

Methods: An institutional review was performed for CSCC cases identified in the Nova Scotia Cancer Registry between 1989 and 2008.

Results: From 1989-2008, 13 cases of CSCC were identified in the Nova Scotia Cancer Registry. Of these, detailed charts with supporting pathological reports were available in 11 cases. Stage at presentation, treatment, and survival outcomes are discussed, as are patient factors known to afford predisposition to this tumor. Cases which presented to Otolaryngology-Head and Neck Surgery tended to be more advanced. CSCC is a rare neoplasm which typically presents in areas of high sun exposure. Even considering these factors, the number of cases identified in Nova Scotia is lower than projected by current epidemiological evidence.

Conclusions: The authors report the experience of a single institution with a rare ocular/orbital neoplasm over a twenty-year period, comparing treatment and outcome measures (disease-specific survival stratified by stage) with those reported elsewhere in the medical literature. General recommendations regarding management (comprehensive staging, extent of surgery, and indications for adjuvant treatment) are provided.

G12. Screening for Obstructive Sleep Apnea: Are the Epworth Sleepiness Scale and Mueller Manoeuvre Really Worthwhile? – A. Fanous, R. Payne, T. Mijovic, V.I. Forest, Montreal, QC

Learning Objectives

By the end of the session, the students, residents and otolaryngologists will appreciate the correlation between commonly used clinical screening tools for obstructive sleep apnea and the severity of disease, as encountered during clinical practice.

Abstract

Objectives: To assess the ability of three commonly used clinical screening modalities at predicting obstructive sleep apnea (OSA). These modalities are: The Epworth Sleepiness Scale (ESS), Mueller Manoeuvre (MM), and specific signs/symptomatology of OSA.

Methods: This is a retrospective case series study of 180 patients undergoing polysomnography to assess for OSA between 2007 and 2010. Prior to polysomnography testing, each patient underwent OSA screening with the ESS, digitally recorded MM, as well as a sleep apnea focussed history and physical exam.

Results: The severity of obstructive sleep apnea, as established by the AHI, correlated significantly with both the MM examination of the base of the tongue ($r = 0.86$ with $p < 0.03$) and with the ESS ($r = 0.72$ with $p < 0.05$). The velopharyngeal and hypopharyngeal MM examinations, although correlating with the AHI ($r = 0.62$ and $r = 0.53$ respectively), were not statistically significant. Finally an unrefreshing sleep on history correlated weakly ($r = 0.54$) with OSA, but this was not statistically significant.

Conclusion: To our knowledge, this is the first study to examine the correlation between OSA severity and commonly used clinical screening tools available to clinicians. The MM examination of the base of the tongue showed an excellent correlation with AHI. ESS showed statistically significant correlation as well.

G13. ENT-Related Adverse Effects of H1N1 Vaccination – F. Chowdhury, B. Blakely, Winnipeg, MB

Learning Objectives

After this presentation the participant shall:

1. Appreciate that there are under-recognized ENT-related complications from H1N1 vaccination.
2. Suspect these H1N1 vaccine-related complications in particular patient presentations.

Abstract

Objective: To study the possibility of unrecognized otolaryngology-related complications from H1N1 vaccine.

Methods: An online survey was sent via surveymonkey.com to the current members of the Canadian Society of Otolaryngology-Head and Neck Surgery who consented to use their e-mail address.

Results: Thirty-nine responses were received. Of 600 otolaryngologists contacted, 39 responded. Of these 8 reported vertigo (4), tinnitus (2), sensorineural hearing loss (3), anosmia(2), respiratory complaints requiring tracheotomy(5) and others including otitis media, sinusitis, hypoesthesia, Guillan-Barre, cervical adenopathy(8).

Conclusion: The H1N1 vaccine is associated with more otolaryngology-related complications than expected. In certain populations the risk of the vaccine may outweigh the benefit.

G14. Patients with Sharp Foreign Body Aspiration, Are We Different? – S. Alromaih, L. Nguyen, Y. Alrajhi, Montreal, QC

Learning Objectives

By the end of the session, medical students as well as residents in ORL, emergency will be able to identify patients with sharp foreign body aspiration easily and efficiently.

Abstract

Objectives: Compare and contrast patients with sharp foreign body aspiration (FBA) in the airways to other non-sharp FBA, in terms of age, social background, presentation and nature of foreign body.

Methods: Case series of patients with FBA in airways and upper digestive tract in multi-centers, between Jan 04 to Dec 09.

Results: Around 10% of patients had sharp FBA in the airway. We noticed that they are overall older. They mostly have same social background. Most of them gave clear history of sharp FBA. Imaging was useful in majority of patients. Most of sharp FBA happened with the same object.

Conclusion: Patients with sharp FBA are different in terms of age, social background, presentation and nature of FBA when compared to other non-sharp FBA.

FACIAL, PLASTIC AND RECONSTRUCTIVE SURGERY

F1. Objective and Subjective Scar Aesthetics in Younger Patients Following Minimal Access vs. Conventional Parathyroidectomy and Thyroidectomy Surgeries – M. Klein, D. O'Connell, P. Dziegielewski, H. Seikaly, J. Harris, Edmonton, AB

Learning Objectives

Following this poster presentation Residents, Fellows, Head & Neck Surgeons, Allied Health Professionals and General Otolaryngologists involved in thyroid and parathyroid surgery will gain a better understanding regarding patient satisfaction with

scar aesthetics following minimally invasive and conventional thyroid and parathyroid surgery. The information presented here will improve the audience's ability to provide evidence based counselling regarding outcomes in patients undergoing transcervical surgeries.

Abstract

Objective: To determine if performing parathyroidectomy surgery through minimal access incisions on patients aged 60 years or younger has any significant aesthetic or quality of life impact on patients when compared to conventional access techniques.

Methods: Minimal access parathyroidectomy surgery (MA-P) vs. conventional thyroidectomy or parathyroidectomy surgeries (CON-T). Sex and age-matched (within 3 years) minimal access and conventional incision and scar cohorts. Post-operative follow-up assessment of scar aesthetics by patient and objective viewer. Digital photography and analysis of surgical incision site. All study follow-up >6 months post-operatively.

Results: All patients <61 years of age. Average age MA-P 45.4 years (+12.4 years). Average age CON-T 46.8 years (+12.7 years). 1. No significant difference in scar assessment scale scores between minimal access and conventional cohorts. 2. No clinically significant difference in overall patient satisfaction with scars between cohorts. 3. Increased visibility of conventional scars to naïve viewers.

Conclusions: Although being more readily visible to naïve viewers, conventional (larger) cervical scars created in parathyroidectomy or thyroidectomy surgery in patients aged 60 years or younger does not translate into decreased patient satisfaction with their scar result. This may indicate a limited quality of life benefit in using minimal access approaches in trans-cervical surgeries.

F2. Interest in Facial Plastic and Reconstructive Surgery Among Practicing Otolaryngologists: A Canadian Survey – J. Dautremont, S. Walen, S. M. Taylor, C. Moore, P. Doyle, K. Zakhary, Calgary, AB

Learning Objectives

By the end of the presentation, CSO members and guests will be able to:

Describe the current scope of facial plastic and reconstructive surgery (FPRS) procedures done by Canadian otolaryngologists;

Describe the current interest and attitude of Canadian otolaryngologists towards FPRS;

Consider the need for increased FPRS exposure and training in Canadian otolaryngology residency training programs.

Abstract

Objectives: The number of facial plastic and reconstructive surgeries (FPRS) performed by Otolaryngology-Head and Neck Surgeons (OTO-HNS) in the United States has risen considerably. Studies in Europe have also found an increased interest in FPRS. The objective of this study was to identify and describe the current interest of practicing Canadian OTO-HNS in FPRS.

Methods: A voluntary, anonymous, web-based survey of Canadian OTO-HNS staff and residents. Respondents identified the amount of FPRS performed, previous training, as well as attitudes towards future training and FPRS as a subspecialty. The response rate was approximately 28% (173/622).

Results: 57% stated that FPRS procedures compose between 1-25% of their practice. 48% of the respondents stated that they were adequately trained in FPRS during their residency. 56% of the respondents pursued additional training in FPRS through supplementary courses. Overall, 56% of the respondents had a favourable impression of FPRS.

Conclusions: There is an interest in FPRS related practice among Canadian OTO-HNS. Most respondents believe that FPRS is an important part of OTO-HNS training. Additional emphasis on FPRS education in residency together with additional Canadian fellowship positions and courses may increase both competency and interest in FPRS.

F3. A Systematic Review of Late Free Flap Failure in Head and Neck Reconstructive Surgery – F. Makki, R. Hart, B. Williams, J. Trites, S. M. Taylor, Halifax, NS

Learning Objectives

This presentation will demonstrate the patterns in late free flap failure in head and neck surgery.

Abstract

Objective: To review published cases of free flap failure after post-operative day 7 in head and neck reconstructive surgery in order to determine any patterns in late failure.

Methods: The literature from the previous 20 years were reviewed for cases of late free flap failure, with data collected regarding flap type, site of reconstruction, reason for failure, and time to failure.

Results: A total of 31 cases of late free flap failure in the head and neck were identified. Among the 25 cases in which the necessary data was available for analysis, 48% of late failures occurred between POD 7 and 14. Common reasons for failure were abscess and vascular compromise.

Conclusion: In patients with risk factors for flap failure, close monitoring for up to 14 days after surgery or rapid follow up should be considered.

EDUCATION

E1. The ENT Resident Intranet: Building a Collaborative Tool for Learning and Service – T. Hartl, Vancouver, BC

Learning Objectives

The learning objectives for this poster include:

1. Residents will appreciate the value of an Intranet as a tool for collaboration and learning in an ENT resident program.
2. Residents will take away a method for developing a low-cost, high-yield, comprehensive Intranet platform for their own program.
3. Academic staff involved in medical student and resident teaching will appreciate the benefits of such a tool to facilitate their own goals for program development.

Abstract

Objectives: To provide or facilitate -

1. Improved communication with and among medical students and residents working on the otolaryngology service.
2. Improved learning opportunities in the clinic and the OR for junior residents and medical students.
3. More and higher-quality otolaryngology resident research.
4. Better preparation for exams.

Methods: Site audiences and their content requirements were identified in a series of three focus groups, gathering input from all 13 ENT residents, 7 medical students and 5 off-service residents. Initial site structure and navigation was created based on expert opinion combined with input from members of each audience group. Content was created, and continues to evolve utilizing an open authorship “wiki” approach without formal incentives.

Results: A comprehensive and useful online tool for communication, collaboration, and teaching has been created at no cost to the department. Site activity has been increasing in a linear fashion, with broadening participation in content development by medical students and residents. Early anecdotal feedback from the 4 learning groups is enthusiastic.

Conclusion: The Intranet is a case study in dynamic innovation in education. A flexible framework has been created, upon which a community of residents and medical students can continue to build, in order to achieve these and other objectives. More formal research to help quantify the educational impact of the site is underway.

E2. McMaster University Otolaryngology-Head & Neck Surgery Residency Training CanMEDS portfolio – D. Reid, Hamilton, ON

Learning Objectives

The objective of this poster presentation is to illustrate the utility of this tool for ongoing documentation of resident participation, education and evaluation of CanMEDS roles for Otolaryngology-Head & Neck Surgery.

Abstract

Objectives: The McMaster University Otolaryngology-Head & Neck Surgery residency program developed a resident CanMEDS portfolio for ongoing documentation of resident participation, education and evaluation of each CanMEDS roles.

Methods: A guide is distributed at the beginning of residency that outlines the activities for each CanMEDS role. The resident is responsible to update the portfolio on an ongoing basis.

Results: The portfolio is reviewed and discussed with the resident as part of the bi-annual evaluation review with the program director. This document helps to collect and verify evidence of the achievement of competence of each of the CanMEDS roles over time. The portfolio can also identify strengths, weaknesses and any personal educational deficiencies that a resident may have.

Conclusion: Being a flexible tool for documenting learning experiences, the portfolio can be easily modified and personalized for use in other residency training programs.

E3. Computer-Assisted Learning in Undergraduate Anatomy Teaching: Has the Pendulum Swung Too Far? – G. Cho, K. Fung, P. Haase, London, ON

Learning Objectives

By the end of this presentation, the audience will:

- 1) Understand the role of computer assisted learning in undergraduate medical curricula.
- 2) Appreciate the challenges of teaching head and neck anatomy in a contemporary blended learning model.

Abstract

Background: Head and neck anatomy (HNA) is taught in the pre-clerkship undergraduate curriculum at our school using a multimodal teaching paradigm, which includes computer-assisted learning (CAL). Initial student feedback revealed a strong preference for learning through lectures, relegating CAL to the least preferred learning modality. This seemed to go against evidence and impetuses supporting the incorporation of more opportunities for CAL in medical curricula.

Purpose: To assess student perceptions of different modalities of learning, as it relates to HNA.

Methods: Survey study

Results: Thirty-five percent of respondents ranked lectures as their most preferred learning modality while 24% ranked it their least. This is in comparison to 22% and 41% for CAL, respectively. The hypothetical “ideal curriculum” consisted of: 31% lectures, 26% labs, 24% tutorials, and 19% CAL. Qualitative data revealed reasons why certain learning modalities were preferred to others (e.g. lectures were preferred over CAL due to opportunities to ask questions).

Conclusion: Head and neck anatomy is complex, and the role of CAL may be overemphasized by undergraduate medical educators. In the context of a blended learning environment, a “middle ground” usage of CAL that is effective, acceptable to students, and complementary to other modalities, remains to be elucidated.

E4. The Impact of Fellows on Residency Education in Otolaryngology - S.D. MacNeil, M. Fabian, Vancouver, BC

Learning Objectives

- By the end of this session conference attendees will understand the impact of fellows on Otolaryngology residency training programs.
- By the end of this session conference attendees will appreciate the opinions of Otolaryngology chief residents regarding the adequacy of Otolaryngology training in Canada.

Abstract

Objectives: In recent years there has been a rapid proliferation of fellowships in Otolaryngology. The extent to which fellows impact negatively or positively on residency education is largely unknown. The purpose of this study is to determine how and if Otolaryngology chief residents are impacted by the presence of fellows in their training program.

Methods: An anonymous, email-based survey of chief residents in Canadian otolaryngology residency programs was performed. Participants were asked to rate their residency experience in terms of overall length, time spent in each subspecialty, and the overall impact of fellows on their training.

Results: Ten respondents completed the survey, yielding a response rate of 34.5%. All participants felt the overall length of Otolaryngology training program was adequate (n=9). Sixty percent of participants had fellows in their residency program. Fifty percent of participants felt that fellows had a positive impact on their training, while the majority (83%) stated at least one fellow had a negative impact on their training.

Conclusion: The overall length of Otolaryngology residency training experience appears to be adequate. While fellows are having a positive impact on residency training in Canada, our results indicate that the negative impact felt by some residents may be more significant.