

---

**Fifty Sixth Annual Meeting**  
**of the**  
**Irish Otorhinolaryngology /**  
**Head and Neck Society**

Trump Doonbeg Resort, Co. Clare, Ireland  
Friday 9<sup>th</sup> & Saturday 10<sup>th</sup> October 2015

---

---

## *Officers*

---

<b>President:</b>	Mr. J. Toner
<b>Vice President:</b>	Mr. D. McShane
<b>Secretaries:</b>	Mr. N. Patil (Southern) Mr. R. Adair (Northern)
<b>Treasurer :</b>	Ms. C. Scally
<b>Members:</b>	Mr. M. Donnelly Mr. R. McConn Walsh Mr. E. McNaboe Mr. G. O’Leary Ms. R. Stewart Mr. K. Trimble

---

## *Past Presidents*

---

T. G. Wilson

F. A. McLaughlin

R. R. Woods

J. McAuliffe Curtin

D. Craig

Kennedy Hunter

M. J. Roberts

R. S. McCrea

M. O'Brien

R. M. Harvey

A. Blayney

T. Wilmot

E. Fenelon

H. W. H. Shepperd

W. Doyle Kelly

A. C. M. L. Miller

A. Maguire

J. E. T. Byrne

H. Burns

A. Kerr

K. Tobin

J. H. A. Black

M. A. Walsh

D. Adams

A. Blayney

W. Primrose

T. O'Dwyer



---

## *Wilde Discoursers*

---

1961	Terence Cawthorne	1988	Philip Stell
1962	Ian Simpson Hall	1989	Dietrich Plester
1963	C.P. Wilson	1990	Arnold G. Maran
1964	Ronald Macbeth	1991	David Brain
1965	W.H. Struben	1992	William Panjee
1966	Angell James	1993	Tony Bull
1967	Michel Portmann	1994	Richard. Ramsden
1968	Howard House	1995	David Kennedy
1969	Joseph Ogura	1996	L. Ryan
1970	J.P. Hood	1997	Ugo Fisch
1971	Harold F. Schucknecht	1998	R. Goody
1972	Donald F.N. Harrison	1999	E. McKay
1973	Stuart Strong	2000	J. Fredrickson
1974	Douglas Bryce	2001	Patrick Gullane
1975	John Ballantye	2002	William Coman
1976	Claus Jansen	2003	Thomas McDonald
1977	Gabriel Tucker	2004	Trevor McGill
1978	L.B.W. Jongkees	2005	Gilbert Nolst Trenite
1979	Robert Pracy	2006	George Browning
1980	George Nager	2007	Kevin Gibbin
1981	R.B. McDowell	2008	Max McCormick
1982	R. Wentges	2009	Peter Wormald
1983	Victor Goodhill	2010	Fred Owens
1984	Douglas Ranger	2011	John Watkinson
1985	H. Spondalin	2012	Richard Canter
1986	P. Alberti	2013	Gerard O'Donoghue
1987	Tauno Palva	2014	Janet Wilson



**Fifty Sixth Annual Meeting  
of the  
Irish Otorhinolaryngology /  
Head and Neck Society**

Trump Doonbeg Resort, Co. Clare, Ireland  
Friday 9<sup>th</sup> & Saturday 10<sup>th</sup> October 2015

**Program**

**Thursday 8<sup>th</sup> October**

- 1600 - 1900            **Registration**
- 1900 - 1940            **IOS Council Meeting**
- 2000 - 2130            **Presidents Dinner / Guest Speakers**  
By invitation only

**Friday 9<sup>th</sup> October**

- 0730 - 0850            **Registration**
- 0850 - 0900            **Welcome by President / Announcements**
- 0900 - 1020            **Free Paper Session 1 (Rhinology)**  
Chairpersons: Tara Mackle / tba
- 0900 - 0908            ANTI-TUMOUR NECROSIS FACTOR THERAPY IS A RISK  
FACTOR FOR CERTAIN SUBTYPES OF CHRONIC  
RHINOSINUSITIS  
CG. Leonard, C. Masih, S. McDonald, G. Taylor, N. Maiden,  
PJ. Leyden

---

Objective: Chronic Rhinosinusitis (CRS) has many risk factors, however, to date the role of Anti-Tumour Necrosis Factor therapy (Anti-TNF) on the condition and its prevalence have not been investigated. In the literature to date, the discussion has focused on the therapeutic benefit of Anti-TNF in CRS with nasal polyposis. Our experience points to a detrimental clinical effect in overall prevalence of CRS. We performed a telephone survey to assess the prevalence within this patient group treated at our hospital.

Methods Patients being treated with anti-TNF within our hospital were asked to participate in a telephone survey. Participants reported age, sex and smoking history prior to answering the GA2LEN CRS screening survey based on the EP3OS diagnostic criteria. Results 120/234 patients agreed to participate in the survey. The prevalence of CRS in the sample (Anti-TNF) population was 20% (95 %CI 12.84 - 27.16). Anti-TNF is a risk factor for CRS when compared using a one-sample test of proportions with prevalence in the population as reported by GA2LEN for our nearest centres London 10% (8.5 - 11.7%) (p= 0.0003) and Southampton 11.2% (8.8 - 14.3%) (p= 0.0022).

Conclusions: This is the first observational study of the impact of Anti-TNF therapy on the

prevalence of CRS. It shows that rates of CRS increase in patients treated with Anti-TNF. These findings are of significance to clinicians responsible for the use of monoclonal antibodies therapeutically and also clinicians treating patients with CRS.

0908 - 0916

MANAGEMENT OF EPISTAXIS AT A SINGLE CENTRE  
EXPERIENCE AND ECONOMIC CONSIDERATIONS  
E. Keane, TK. Subramaniam, H. Khan, N. Patil

---

**Objective:** Epistaxis represents one of the most common ENT emergencies and the management of this condition has been a focus of clinical audit in recent years, with consideration given to the associated economic burden. The aim of our study is to evaluate the management of patients with epistaxis in terms of the variety of treatments used, duration of inpatient stay, recurrence rate and associated cost.

**Methods:** A retrospective review of hospital inpatient enquiry (HIPE) data from a single secondary referral centre in Ireland during a four year period between 2009 - 2012. All patients with admission diagnosis coded as 'epistaxis' were included.

**Results:** During this period, 434 people were admitted for the treatment of spontaneous epistaxis. The majority of patients (60.3%) were male and the average age was 64.2. Non-operative management with packing and/or cautery was undertaken in the vast majority (83.6%) of patients. Conservative management (topical therapy and observation alone) was undertaken in 12.9%. Only 15 patients (3.5%) had an examination under anaesthesia and nasal cautery. Approximate costs of packing vs EUA and cautery suggest that packing alone is the more economical option but more data is needed to fully compare the two options.

**Conclusion:** Further research and audit is required into optimising the management of this common ENT event but our data suggest that packing alone is the most economical. The priority remains to provide durable haemostasis and to avoid causing any undue discomfort to the patient.

0916 - 0924

USE OF KTP LASER DERMASTAT IN THE TREATMENT OF  
RECURRENT ANTERIOR EPISTAXIS - A NEW TECHNIQUE  
(THE JAIN TECHNIQUE)  
A. Jain, S. Frampton, R. Sachidananda, PK. Jain

---

**Objective:** To evaluate the short-term effectiveness of application of the KTP Laser Dermastat, in patients with recurrent anterior epistaxis.

**Methods:** Fifty-eight patients presenting to a DGH with recurrent anterior epistaxis were treated with KTP Laser Dermastat photocoagulation. The inclusion criteria were recurrent epistaxis arising from prominent vessels in the Little's area, and/or those who had failed treatment with silver nitrate cautery. The main outcome measure was complete resolution of epistaxis at 2 months.

**Results:** Fifty-eight patients were treated with KTP Laser Dermastat Photocoagulation; twenty-seven of which were under 18 years of age. Thirty patients had prominent vessels; the remainder had clear, distinct bleeding points. Thirty-one patients had previously been treated with silver nitrate cautery. Three patients therefore met both inclusion criteria. Thirty-eight patients had laser photocoagulation to the left side, nineteen to the right, and one to both. At 2-month follow up, 74% reported complete resolution of epistaxis with no reported complications. This increased to 78%, without any further treatment, at further follow-up (which ranged between 2.5 months and 6 months).

Conclusions: KTP Laser Dermastat photocoagulation is a successful and safe method of treatment for recurrent anterior epistaxis, in patients with prominent Little's area vessels and/or patients who have failed silver nitrate cautery. Single treatment is effective in this otherwise treatment-resistant group. The KTP Laser Dermastat method could be considered as first- or second-line treatment in these populations, and is cost-effective given that the Dermastat can be sterilised, and is therefore reusable.

0924 - 0932                      ACTIVATING BRAF MUTATIONS IN SINONASAL MELANOMA  
S. Casey, AM. Larkin, S. Kennedy, A. Curran

---

Objective: Mucosal melanoma is a rare but highly aggressive form of melanoma. 25-50% of mucosal melanomas occur in the head and neck. Currently there are no effective treatment strategies for sinonasal melanoma. Mutations in the KIT gene are commonly present in mucosal melanomas. Studies reporting the incidence of activating BRAF mutations in mucosal melanoma are conflicting with the majority of studies finding low BRAF mutation rates; it is thought that diverse genetic factors contribute to this observation.

Study Aim: To study the incidence, staging, histology, treatment and outcome of Melanoma of the Head and Neck as well as BRAF activating mutations in Irish patients that have been diagnosed with sinonasal melanoma. The activation of the Ras-Raf-MEK-ERK pathway will also be determined in this melanoma sub-type. If BRAF mutations are found to be a common occurrence in this cohort, this observation has important therapeutic relevance.

Methods: Data was obtained from St Vincent's University Hospital and RVEEH using available melanoma databases and HYPE. Immunohistochemical analysis of mutated BRAFV600 was carried out with a BRAFV600E specific antibody used to detect activating BRAF mutations. Immunohistochemical analysis of other downstream targets of BRAF was also performed.

Results: Sinonasal melanomas account for up to 70% of head and neck mucosal melanomas. These tumours show a much more aggressive clinical course and poorer prognosis than their cutaneous counterparts with 5 year survival of 8%. Conclusion Molecular analysis of melanoma and genetic manipulation of the tumour pathway offers a novel approach to treatment with improved patient outcome.

0932 - 0940                      PATIENT REPORTED OUTCOMES AND COMPLICATIONS  
FOLLOWING SEPTOPLASTY  
J. Bradley, A. Kelly, C. Leonard, J. Cullen

---

Objective: This study aimed to evaluate the benefit of surgery in connection with disease specific symptoms following septoplasty using the Nasal Obstruction Symptom evaluation (NOSE) scale. We also sought to identify post-operative complications following septoplasty.

Methods: We identified 81 patients undergoing Septoplasty surgery between December 2013 and April 2015 in different ENT units of three health trusts in Northern Ireland. The NOSE tool was used as a short validated questionnaire with our patients completing pre-and post-operative (3 months) NOSE scores. We also pulled individual case notes reviewing discharge and outpatient clinic letters, using the theatre management systems to search for potential complications following septoplasty.

Results: Of 81 patients that responded to the questionnaire, 57(70%) reported improved NOSE scores post-operatively. Mean NOSE score improved from 68 pre-operatively to 24 at three months post-operatively. There was no conclusive evidence that smoking status

worsened post-operative outcomes following septoplasty. The complication rates from the septoplasty operations undergone by this patient population were similar to published outcome data from a comparative study.

Conclusions: Septoplasty operations carried out within the three trusts showed significant improvements in the individual components of the NOSE score and the global score as a whole. The reliability of the NOSE score as a valid outcome measure for nasal surgery is derived from the patient centred assessment of nasal symptoms following surgery. Nasal obstruction and its sequelae caused by nasal septal deviation are successfully resolved following Septoplasty.

0940 - 0948

#### 14 YEARS OF ALLERGEN SPECIFIC RHINITIS IN THE WEST OF IRELAND

K. Davies, K. Hinchion, P. Gormley, I. Keogh

---

Objective: Approximately 30% of the Irish population is affected by allergic rhinitis. Symptoms include sneezing, obstruction, rhinorrhoea, anosmia and excessive fatigue. We reviewed fourteen years of skin allergy tests carried out at our institution. Analyzing the prevalence of allergic rhinitis and the principle sensitizing allergens in terms of geographic location and affected population.

Methods: A retrospective review of 1108 symptomatic patients who had been referred for skin allergen testing. Standard skin allergen testing was performed via intradermal challenge to include positive and negative controls and common inhaled allergens. Results: 587 women and 521 men were included. Mean age was 34 years (range: 3-85 years). Prevalence of positive testing was 48%, which was equally distributed between genders. Highest prevalence was in the 1st to 4th decades of life. Common allergens included house dust mite and grass mix. The pattern of dominant allergens was dependent on the geographic region and the degree of urbanization, but the overall prevalence of sensitization to allergens did not vary greatly across the west.

Conclusion: Our results found that as the years progressed and with the advent of published allergic rhinitis guidelines, skin allergen testing referral patterns improved at our unit, resulting in improved patient management and cost savings. Our results also allowed us to develop a unique geographical map of principle allergens recorded in patients from the West of Ireland.

0948 - 0956

#### THE MANAGEMENT OF FIBROUS DYSPLASIA ASSOCIATED SINONASAL COMPLEXITIES

A. Naude, P.Lacy.

---

Objective: Fibrous dysplasia (FD) is a rare genetic mutation where normal bone is replaced with benign fibro-osseous connective tissue leading to distortion and local expansion of the bone involved. Sinonasal FD patients are a heterogeneous group of patients, as the disease can affect single (monostotic) or multiple skeletal (polyostotic) sites leading to a variable clinical presentation. The purpose of this presentation is to relate our clinical experience with the diagnosis, surgical strategy and follow up of sinonasal FD.

Methods: Retrospective review of all patients with FD between 2010 and 2015.

Results: A total of 11 patients were identified, 7 males (64%) and 4 females (36%). The presenting symptoms were mainly sinonasal with headaches (45%), facial pain/pressure (18%), and nasal obstruction (27%). Four patients (36%) presented with associated eye

symptoms e.g. proptosis and diplopia. FD was an incidental finding in 2 (18%) cases. Eight patients had polyostotic FD, while 3 patients had monostotic FD. Six symptomatic patients (27%) underwent endoscopic sinus surgery without resection of the lesion, while three patients underwent an external approach resection of their FD. Two patients only underwent endoscopic biopsy to attain histological diagnosis and were followed up with serial radiological data.

Conclusions: These cases demonstrate the diverse functional sinonasal abnormalities that can present due to FD's local expansion of bone. We would advocate reserving surgical intervention for the symptomatic patient, mostly in the form of endoscopic sinus surgery, with the aim of improving quality of life or for diagnostic purposes.

0956 - 1004

ETIOLOGICAL PROFILE AND TREATMENT OUTCOMES OF  
EPISTAXIS AT A MAJOR TEACHING HOSPITAL; A REVIEW OF  
721 CASES

B. Carey, P. Sheahan, P. O'Sullivan

---

Background: Epistaxis the most prevalent ENT emergency and a significant burden on ENT services. The objective of this study is to investigate the incidence and outcomes of patients presenting with epistaxis at a major teaching hospital.

Methods: Retrospective descriptive study of 721 patients who presented with epistaxis over a one year period. Data collected was analysed using SPSS software version 20.

Results: Of the 721 patients who presented, initial treatment was by nasal cautery (298), nasal packing (200), or no treatment (223). 59 patients were admitted. The mean age of admitted patients was 66.8 years and the male to female ratio was 2:1. 69.5% had hypertension and 78% used antiplatelet/anticoagulation medication. The majority of admitted and return patients were out of hours referrals from ED and the mean admission duration was 5 nights. Surgical treatment for intractable epistaxis included arterial ligation or endovascular embolization. Successful treatment was defined as no recurrent epistaxis following pack removal or no readmission with epistaxis within 24 hours of hospital discharge. 644 patients had successful treatment.

Conclusion: More return and admitted patients presented at out-of-hours times with less clinical staff on site. Most non-admitted patients receive no treatment. These factors possibly lead to increased stress on the ENT casualty service. Cautery and nasal packing are the most common treatment modalities in first-time and admitted patients yet result in higher rate of representation.

1004 - 1012

ETHNIC VARIATION IN PARANASAL SINUS ANATOMY

A W. Hoey, R. Lakhani, S. Connor, C. Hopkins

---

Introduction: The aim of our study is to assess whether there is a significant variation in the paranasal sinus anatomy between the most common ethnic groups undergoing Functional Endoscopic Sinus Surgery (FESS) at an inner city teaching hospital.

Methods: The most common population groups were identified by the 2011 Census data. We assessed all patients who underwent FESS between August 2013 and 2015. Consecutive pre-operative CT sinus scans were assessed for variations in: ethmoid sinus height, measured from fovea ethmoidis; Keros classification and angle of lateral lamella to fovea ethmoidis. Patients who were excluded included those without ethnicity data, with gross abnormalities or who had undergone previous sinus surgery.

Results: White patients had the highest asymmetry between left and right ethmoid heights (average 9.1mm vs 5.1mm for Black patients and 3.9mm for Asian patients. There was no significant difference between left and right asymmetry for Keros classification. The majority of White and Black patients were classified as Keros type 2. Asian patients had the highest proportion of Keros type 3 patients (approximately 40%). Average ethmoid sinus height was 29.00mm, 30,71mm and 32.54mm for White, Black and Asian patients, respectively with a Standard Deviation of 1.45. Similarly, average lateral lamella height was 4.76mm, 5.21mm and 6.72mm, respectively with a Standard Deviation 0.84.

Conclusion: Appreciation of variations in the anatomy of the ethmoid roof that can occur in different patient populations is important for an ENT surgeon in order to minimize the risk of complications in Functional Endoscopic Sinus Surgery.

1012 - 1020

**ENDOSCOPIC INTERNAL MAXILLARY ARTERY LIGATION**  
C. Brophy, CB. Heffernan, T. Moran, C. Colreavy

---

Introduction: The nasal cavity has an extensive and varied blood supply with many collaterals from both the internal and external carotid systems. Epistaxis is a frequent cause of emergency department presentations. The traditional algorithm suggests that anterior epistaxis is treated with packing or cautery. Whilst posterior is treated with packing or, if unsuccessful, arterial ligation in the form of sphenopalatine artery ligation. If these are unsuccessful the next options are external artery ligation or arterial embolisation.

Objective: To review the operative technique of endoscopic internal maxillary artery ligation and to show that endoscopic ligation of the internal maxillary artery may be included in the epistaxis management algorithm.

Methods Case series of three patients who underwent endoscopic internal maxillary artery ligation.

Results: Two male patients and one female. The mean age of the patients was sixty nine years. Two were performed as emergency procedures. One carried out after unsuccessful SPA ligation in the weeks previous. The second was converted to IMAX ligation intraoperatively following unsuccessful SPA ligation. The third case was carried out electively. All patients were discharged home between 1 and 5 days postop.

Conclusion Endoscopic internal maxillary artery ligation should be considered in the epistaxis algorithm and we found that there was no need for increased expertise or equipment.

1020 - 1100

**Free Paper Session 2a (Otology)**

Chairpersons: Paula Casserly / Ted Mc Naboe

1020 - 1028

**EVOLVING MANAGEMENT OF VESTIBULAR SCHWANNOMA**

C. Wijaya, R. McConnWalsh, A. O'Connor, K. Walsh,  
M. Javadpour, D. Rawluk, A. O'Hare, S. Looby

---

Objective: To describe the evolution of vestibular schwannoma (VS) management in Beaumont Hospital Neurotology and Skull Base Multidisciplinary Team.

Methods: Using the prospectively collated neurotology and skull base database, we have analysed all patients with a diagnosis of VS. Their evolving managements over a twentythree year period were reviewed systematically.

Results: Between 1992 to 2015, a total of 1041 patients were identified and included in the

analysis. Management options are categorised into conservative management (CM), Stereotactic Radio Surgery (SRS), and Microsurgery (MS). Over the years, CM by means of radiological surveillance has become the primary modality. While MS remains the primary surgical management, the introduction of SRS has contributed to the declining trend, away from traditional microsurgery.

Conclusions: Within this Beaumont VS series, there has been a clear recent evolution in management toward CM followed by SRS.

1028 - 1036

#### BALANCE DYSFUNCTION IN VESTIBULAR SCHWANNOMA PATIENTS

F. Toner, S. Hampton, S. Cooke, N. Bailie

---

**Objectives:** Vestibular schwannomas (VS) are benign slow-growing tumours of the vestibular nerve. The associated vestibular dysfunction is usually gradual, due to the central adaptive mechanisms i.e. vestibular compensation. Therefore patients with small/intracanalicular VS's often do not complain of any dizziness or balance symptoms. Our aim was to compare balance test results of patients with a known intracanalicular vestibular schwannoma to matched controls to assess the degree of sub-clinical vestibular hypofunction.

**Methods:** 16 patients attending the Regional Neuro-otology Clinic with unilateral Intracanalicular VSs identified. These patients were assessed using a low-cost posturography system involving custom written software for a Wii balance board. The software interfaces with the Wii balance board and is able to measure the Modified Clinical Test of Sensory Interaction and Balance and this data enables quantification of any vestibular dysfunction.

**Results:** There was a statistically significant difference ( $P = 0.0124$ ) between the study and control group during the test condition isolating vestibular function (compliant surface / eyes closed), with the VS patients demonstrating much greater variability in centre of pressure. This was despite the VS patients not reporting any significant dizziness on Dizziness Handicap Questionnaires.

**Conclusions:** Our results indicate that patients with intracanalicular vestibular schwannomas, while being largely asymptomatic from a balance perspective, have a measurable impairment of balance function. The implications for patient counselling will be discussed.

1036 - 1044

#### BONE ANCHORED HEARING AID (BAHA) REFERRALS: AN ANALYSIS OF ULTIMATE PATIENT MANAGEMENT.

D. Brinkman, R. Katiri, S. Kieran

---

**Objective:** Upon referral to a BAHA centre, patients are assessed by a multidisciplinary team consisting of surgeons, audiologists and nurses in a process involving audiology diagnostic assessments, BAHA demo trials and counselling. The aim was to audit the referrals for BAHA to analyse their ultimate management outcome. We also aimed to highlight the indications for BAHA and why some referrals were deemed unsuitable.

**Methods:** Outcomes of referrals received by ENT since Q1 2013 to present were reviewed. Suitability for BAHA and alternative therapies were logged.

**Results:** 98 patients have been assessed in 2.5 years. 32 have undergone BAHA implantation with a further 7 awaiting surgery. 59 have not undergone BAHA surgery. These were further divided into those who refused surgery ( $n = 23$ ) underwent an alternative therapy ( $n = 20$ ), fell outside our catchment area ( $n = 12$ ) or did not fit the audiological criteria for BAHA implantation ( $n = 4$ ). Alternative therapies included middle ear surgery ( $n = 13$ ) and

alternative hearing aids (n = 7).

Conclusions: While there are many appropriate referrals for BAHA assessment, just over 60% fail to progress to the ultimate outcome. Greater awareness of audiological criteria for referral and alternative therapies available may reduce the assessment burden and increase the number of those that would benefit being reviewed sooner.

1044 - 1052

### SURGICAL REPAIR OF TEGMEN DEFECTS

W. Hasan, A. O'Connor, RM. Walsh

---

**Objective:** Erosion of the tegmen tympani and mastoideum components of the temporal bone may predispose to the development of meningoencephaloceles, spontaneous CSF leaks and sinister intracranial complications. Chronic middle ear disease and previous surgical procedures are among the commonest causes of this condition. Intracranial hypertension may be a contributing factor to this disorder and must be fully evaluated and treated when present. The purpose of this study is to discuss our clinical experience with this uncommon condition. **Methods:** The authors conducted a retrospective review of patients undergoing transmastoid repair of tegmen defects.

**Results:** 66 patients were included in this study. Patient's demographics, surgical techniques, intraoperative findings and post-surgical outcomes were reported. **Conclusion:** The transmastoid approach is an effective surgical intervention for the repair of tegmen defects, encephalocele, meningoencephalocele, and CSF leaks. This approach can be utilized in selected patients as the procedure of choice to repair single or multiple tegmen defects. This approach enables the surgeon to assess the status of middle ear pathology and simultaneously repair the middle ear conduction mechanism if needed. It can be safely and effectively utilized for selected anterior and medial defects in the lateral skull base.

1052 - 1100

### REVIEW OF VERTIGO DIAGNOSIS AND MANAGEMENT IN A SPECIALISED EMERGENCY SETTING

S. Casey, B. Speaker, P. Casserly

---

**Objective:** Dizziness, loss of balance and vertigo are relatively common reasons for presentation to our ENT Emergency Department (ED). Benign Paroxysmal Positional Vertigo (BPPV) is the most common but can be confused with more sinister pathology. Given the extensive diagnostic possibilities there is a need for a time efficient reproducible assessment to reach the correct diagnosis. We reviewed the current efficacy of our history, examination and work up in this setting.

**Methods:** A retrospective chart review was performed. All patients presenting to the ED with symptoms of dizziness, imbalance or vertigo over a 6 month period were included. Clinical symptoms, signs, suspected diagnosis, further investigations and patient outcome were recorded.

**Results:** The primary presenting complaint was vertigo (48.3%), dizziness (34.5%) or loss of balance (6.9%). Duration of symptoms ranged from 2 days to several years with variable lengths of each episode. Associated symptoms included nausea, vomiting, hearing loss, tinnitus, blocked or painful ears, infected ears and sinusitis. Nystagmus was present in 9.5% Rombergs positive in 9.5%. There were no positive fistula tests. 12.2% of patients had clinically significant findings and were referred for further investigations. 57.8% were sent for vestibular physiotherapy. Of those referred the working diagnoses included BPPV, Menieres, acoustic neuroma, cholesteatoma, and microembolic events. Relevant imaging was

arranged accordingly.

Conclusion: Given the variable pathologies associated with these presenting symptoms, awareness and early identification of positive clinical signs will help optimize the accuracy and efficiency of diagnosis of vertigo and dizziness.

**1100 - 1130                      Coffee Break**

**1130 - 1210                      Free Paper Session 2B (Otology)**  
Chairpersons: Paula Casserly / Ted McNaboe

1130 - 1138                      DOES MASTOID CAVITY OBLITERATION SUCCESSFULLY  
REDUCE CAVITY VOLUME IN THE LONG TERM?  
E. O'Reilly, B. Conlon

---

Objectives: Mastoidectomy remains mainstay of treatment for cholesteatoma. Modified radical mastoidectomy involves creation of a mastoid cavity; which may predisposes patients to cavity infections. As a result, mastoid cavity obliteration techniques have been developing for over a century. Material advocated for cavity obliteration include muscle, fat, cartilage, bone dust and a variety of synthetic graft material. The long term results with cavity obliteration techniques remains unclear. Our aim was to determine the ability of Mastoid cavity obliteration with bone dust harvested during surgery to successfully reduce cavity size in both the short and long term.

Methods: We compared cavity volume in patients who had undergone modified radical mastoidectomy with cavity obliteration to patients who underwent the same procedure without obliteration. Cavity volume was determined by measuring the volume of ciprofloxacin drop solution the cavity would hold. We determined the ability of obliteration to maintain volume over time.

Results: We determined that bone dust obliteration successfully reduces cavity size by an average volume of 40%. Volume reduction is maintained in the medium to long term.

Conclusions: Modified Radical Mastoidectomy with bone dust cavity obliteration significantly reduces mastoid cavity volume and this may be beneficial in reducing long-term complications associated with large volume mastoid cavities.

1138 - 1146                      CLINICAL OUTCOMES FOLLOWING STEREOTACTIC  
RADIOSURGERY FOR VESTIBULAR SCHWANNOMAS - A  
RETROSPECTIVE REVIEW  
R. Poole, P. Lawton, R. McConn Walsh, D. Rawluk, K. Walsh,  
A. O'Connor, N. Javadpour

---

Objective: To evaluate the safety of stereotactic radiosurgery as a primary treatment modality for vestibular schwannomas in terms of short and long term complications, the frequency of their occurrence and the average duration of inpatient hospital stay.

Methods: Between May 2013 and 2015, approximately 52 vestibular schwannoma patients were treated with frameless stereotactic radiosurgery. Clinical follow up notes and audiometric results were reviewed retrospectively.

Results: Common complications following stereotactic radiosurgery for vestibular schwannoma are: facial weakness, facial numbness, residual tinnitus and loss of hearing.

These complications occur at a low rate and have decreased since the introduction of this treatment modality.

Conclusions: Stereotactic radiosurgery is a safe and effective non-surgical treatment of vestibular schwannomas with a low rate of adverse clinical outcomes, resulting in a shorter in-hospital stay.

1146 - 1154                      WHAT ARE THE INDICATORS FOR EFFECTIVE VESTIBULAR REHABILITATION?  
R. Katiri, D. Duffy & M. P. Colreavy

---

Objective: The aim was to evaluate the current vestibular rehabilitation provision and assess the effectiveness of services delivered to patients diagnosed with vestibular problems at a tertiary acute setting. Methods: The study evaluated the diagnosis of patients referred for vestibular rehabilitation and correlations / predictors for increased rehabilitation effectiveness. Seventy patients referred for vestibular assessments were reviewed to identify the vestibular pathology and intervention plans.

Results: Out of seventy referrals, the majority were from ENT (62.9%) and a quarter (24.3%) from Neurology. A total of 62 patients attended, 11.4% DNA. The mean age was 53.9 years (Range: 20.9-84.3). Of the attendees 61.3% were deemed as good rehabilitation candidates by audiology but only 21 (55.3%) were subsequently formally referred to vestibular physiotherapy by their ENT (71.4%) / Neurology (21.6%) consultant. The main diagnoses were unilateral (50%) or bilateral (20%) peripheral weakness, mixed (10%) and migraine related (20%).

Conclusions: The results indicate that the majority of patients need five vestibular rehabilitation sessions. It is anticipated that approximately half of the patients with balance problems assessed by a diagnostic vestibular audiology service can be effectively discharged to the care of a specialist vestibular physiotherapist. The utilization of vestibular rehabilitation services if the logistics and infrastructure exist demonstrates a significant reduction in numbers of visits in OPD as well as minimizing the distress and disability attributable to vestibular problems.

1154 - 1202                      THE ACCURACY OF THE GP LETTER IN PREDICTING SUITABILITY FOR DIRECT AUDIOLOGY CLINIC  
T. O'Rourke, R. Katiri & S. Kieran

---

Objective: The aim was to evaluate the outcomes of a recently developed acute hospital 'pilot' pathway. GP referrals addressed to ENT were triaged for either the ENT clinic or forwarded directly to audiology. Based on the audiological consultation, if deemed appropriate, the patient was discharged back to their GP without seeing ENT. The study attempted to ascertain if there were 'key words' in the GP letter that could indicate whether the patient could be seen and discharged by audiology, or require subsequent ENT consultations. Methods: GP referrals received via ENT from March 2014 onwards were reviewed. Out of the total 37 referrals; 34 attended (92%). Results: Twenty-one (62%) of all attendees were recognised as needing a subsequent ENT Consultation. Reasons included audiogram asymmetry (33%) and/or tinnitus (19%). Thirteen patients (38%) were discharged back to GP without ENT consultation. The GP referrals indicated no obvious requirement for subsequent ENT consultation. Key words most commonly used by GPs (70%) included 'difficulty hearing in background noise' and 'reduced hearing'. The average patient age was

51 years and average waiting time was 13 days.

Conclusions: Currently, it is not possible to firmly determine the need for ENT consultation by the GP letter alone. The audiological consultation outcome is the most precise determining factor. Outcomes highlighted the need for redesigned standardized GP referral pathways to ENT that will allow effective triaging and appropriate access to services as well as cost-effective use of resources.

1202 - 1210                    **A CLINICAL REVIEW OF TEMPORAL BONE GLOMUS TUMOURS.**

T. Subramaniam, RSR Woods, C. Walsh, R. McConn Walsh

---

Introduction: Glomus tumours are benign tumours originating from neural crest cells. The primary management of glomus tumours within the temporal bone is surgical excision with stereotactic radiosurgery remaining a relevant option.

Objectives: The aim of this study is to review clinical presentation, investigations and the management of temporal bone glomus tumours. We also review the long term outcomes following management.

Methods: A retrospective clinical review of symptoms, investigations, treatment and long term outcomes of patients with glomus tumours, managed in Beaumont Hospital Dublin from 1987 to July 2015.

Results: A total of 51 patients with temporal bone glomus tumours were reviewed for further management. Thirty-nine patients were managed with surgical resection, 12 patients were managed with both surgery and radiation therapy and 6 patients received only radiation therapy. Pre operative embolization was done in 11 patients.

Conclusion: A complete clinical work up of a patient presenting with temporal bone glomus tumour is key to determining the appropriate management option. Both surgical resection and radiosurgery are viable options for management, with long term follow up of patients required.

**1210 - 1300                    Free Paper Session 3A (Head & Neck)**

Chairpersons: Neville Shine / Barry Devlin

1210 - 1218                    **10-YEAR REVIEW OF SURGICAL MANAGEMENT OF PRIMARY HYPERPARATHYROIDISM**

S. Ryan, J. Morariu, D. Courtney, C. Timon

---

Objective: Treatment for primary hyperparathyroidism necessitates complete excision of involved parathyroid tissue. Simultaneous thyroidectomy may however be required to optimise operative access and/or where suspicion of synchronous abnormal thyroid pathology exists. The aim of this study was to review our surgical management of primary hyperparathyroidism, determine how often thyroidectomy was also required during parathyroidectomy and the nature of any associated pathology.

Methods: 150 parathyroidectomy procedures performed between 2003 and 2013 were reviewed.

Results: Traditional cervical neck exploration was performed in 62% of cases (mean scar length=3.2cm) and minimally invasive approach in 38% (scar=2cm). Corrected calcium and PTH were  $2.9 \pm 0.02$  (mean  $\pm$  SEM) and  $192 \pm 26$  pre-op and  $2.3 \pm 0.03$  and  $37 \pm 7$  post-op respectively. Positive correlation between adenoma location identified intra-operatively

and pre-operative imaging with SPECT-CT and ultrasound occurred in 63% and 51% of patients respectively (average adenoma weight 1.44g) with pre-op PTH levels of 206. In contrast, negative correlation occurred in 37% and 49% of SPECT-CT and ultrasound studies with associated significantly smaller specimen weights (0.92g) and pre-op PTH levels of 133. 26% of patients (n=39) underwent simultaneous partial thyroidectomy. Dual parathyroid and thyroid pathology was identified in 24% (n=36), 14% of which were coincidental malignant thyroid lesions.

Conclusion: We reviewed the surgical management of patients with primary hyperparathyroidism. Synchronous thyroid surgery was deemed necessary in a quarter of all parathyroidectomy procedures performed for treatment of primary hyperparathyroidism with coincidental thyroid pathology common. The limitations of standard pre-operative imaging accuracy in locating involved parathyroid tissue are highlighted.

1218 -1226

CYTOKERATIN 7: A NOVEL BIOMARKER IN HUMAN  
PAPILLOMAVIRUS-RELATED OROPHARYNGEAL  
SQUAMOUS CELL CARCINOMA

RSR. Woods, E O'Regan, M. Toner, S. Kennedy, CM. Martin, JJ.  
O'Leary, CV. Timon

---

Objective: CK7 is a junctional biomarker with a SEVIKA fragment which stabilises HPV-16 E7 transcripts. We assess the expression pattern of CK7 in oropharyngeal tumour specimens and correlate with HPV genotype, p16ink4a status and clinical data.

Methods: Archived tumour specimens and epidemiological data were collected from patients presenting with new primary oropharyngeal SCC at two head and neck centres over 10 years. Briefly, DNA was extracted from tissue blocks and HPV testing carried out using SPF10 HPV PCR. HPV positive cases were evaluated using INNO-LiPA HPV Genotyping [Fujirebio]. Immunohistochemical staining for CK7 [Clone SP52] was performed on tissue blocks following optimisation on the Ventana BenchMark Ultra Immunostainer. Analysis was by light microscopy using the H score. CK7 expression was correlated with epidemiological data, p16ink4a positivity and HPV status using SPSS.

Results: There were 220 cases of oropharyngeal SCC. 41% demonstrated p16ink4a positivity and 44% demonstrated HPV positivity (95% HPV-16). CK7 expression was observed in the tonsillar crypt epithelium of both normal tonsils and tumour specimens. 56% of cases were positive for CK7, with 38% of cases demonstrating H score of >60. CK7 expression in the tumour cells was significantly linked to high risk HPV and p16ink4a-positivity (p=0.0046).

Conclusions: We present novel findings of CK7 expression in the tonsillar crypts of oropharyngeal SCC. Our results suggest that expression of CK7 in normal tonsillar crypt epithelial cells provides a selective advantage to HPV-related carcinogenesis at this site, possibly due to the unique propensity of CK7 to bind and stabilise HPV-16 E7 transcripts.

1226 - 1234

TOTAL LARYNGECTOMY; SHOULD WE ALWAYS EXCISE THE THYROID?

LR. Smith, AEL. McMurrin, B. Devlin

---

Objective Ipsilateral hemi-thyroidectomy is carried out routinely at our institution during total laryngectomy for malignancy. To evaluate the necessity of this practice, we sought evidence of thyroid involvement from total laryngectomy specimens. Methods A retrospective case-note review was carried out of all total laryngectomies performed to manage malignancy over a five-year period. Information on the tumour site, stage and cell type was recorded. Results Of 96 cases, 16 were excluded because no thyroid tissue was excised with the total laryngectomy. Of the 80 remaining cases, 29 specimens showed abnormal thyroid tissue (36%). In 22 cases (28%) the thyroid abnormality described was benign; including thyroid nodularity and cysts. Malignant features were found in 7 cases (9%), including 5 cases of tumour invasion, 1 case of metastasis in the thyroid gland and 1 unrelated papillary thyroid carcinoma. Subsite analysis showed that glottis tumours were more likely to be associated with invasion into the thyroid. Furthermore, tumours with a higher T stage were also more likely to have associated thyroid involvement, though 3 of the cases of tumour invasion were staged as N0. Conclusions Malignant involvement of the thyroid gland in total laryngectomy specimens is relatively high at 9%. Despite extensive analysis it is difficult to highlight reliable predictive factors for this thyroid involvement, and as such we would recommend the continued practice of routine ipsilateral hemi-thyroidectomy as part of total laryngectomy for malignancy.

1234 - 1242

TRANSORAL LASER MICROSURGERY FOR EARLY STAGE LARYNGEAL CANCER: GALWAY EXPERIENCE

F. Tan, O. Young

---

Transoral laser microsurgery (TLM) was pioneered in the early 1970s as an approach to treat laryngeal pathology with precision and minimal thermal damage to the vocal cords. Over the last four decades, TLM has become one of the primary treatment options for early-stage laryngeal tumors. The EaStER trial (Early Stage Glottic Cancer: Endoscopic Excision or Radiotherapy) has shown that TLM is the preferred treatment among patients offered treatment options for early laryngeal cancer. The aim of this study is to elucidate our experience in the indications, techniques, and oncological outcomes of TLM for early stage laryngeal cancers. A retrospective study was conducted in Galway University Hospital to include 23 patients who were diagnosed between November 2011 and July 2015 as T1a or T1b glottic squamous cell carcinoma and received TLM as primary treatment modality. Patient list was generated from theatre logbook, and confidentiality was strictly adhered to. Information was obtained from OPD and operation notes, and histopathology and radiology reports. SPSS 22 was used to perform statistical analysis. Patient demographics and disease epidemiology, presenting symptoms, tumor location, TNM staging, post-operative complications, local control rate, and recurrence have all been assessed. Our current management for early laryngeal cancer using TLM is comparable to international consensus. The information from this study should be used in future practice to improve the patient outcome. Pooled prospective evaluation of data between centres should be considered as future work.

1242 - 1250

**FROM SOUTH KOREA TO IRELAND; THE PAPILLARY THYROID CANCER DRIVEN EPIDEMIC CONTINUES**

P. Lennon, S. Deady, J. Kinsella, C. Timon, M. Morrin, M. Leader, A. Agha, A. Hill, JP. O'Neil

Objective: The incidence of thyroid cancer is increasing rapidly in most countries. This appears to be driven by the over-diagnosis of small papillary thyroid cancer. The aim of our study was to analyze the incidence of thyroid cancer in Ireland. METHODS: We carried out a retrospective analysis of the Irish national cancer database between 1994 and 2012.

Results: A total number of 2261 cancers of the thyroid gland were identified. The incidence increased from 1.6/100,000 in 1994 to 5.97/100,000 in 2011, an annual percentage change of 8.2%. The risk of being diagnosed with thyroid cancer was 3.7 times greater in the later years ( $p < 0.00001$ ). The proportion of papillary thyroid cancer of the total number increased from 49% in 1998 to 83% in 2012. The number of T1-T3 tumours all increased whilst T4 tumours remained stable. Patients with early stage were found to have exceptional 5, 10 and 15-year overall survival rates at 98.7%, 98.2% and 98.2% respectively.

Conclusions: Ireland has not been spared by the rise in thyroid cancer seen worldwide. There may be some increase in larger tumours but mainly the uncovering of small papillary thyroid cancers, which in all likelihood would have remained subclinical, drives this rise in incidence. The challenge in the future will be to identify those malignancies that will cause harm.

**1250 - 1400**

**Lunch**

**1400 - 1420**

**Annual General Meeting**

**1420 - 1500**

**Free Paper 3B (Head & Neck)**

Chairpersons: Neville Shine / Barry Devlin

1420 - 1428

**INVESTIGATING THE SENSITIVITY AND SPECIFICITY OF CT TO DETERMINE POSITIVITY OF LEVEL I INVOLVEMENT IN ORAL CAVITY SQUAMOUS CELL CARCINOMA.**

N. Elsafty, G. O'Leary, P. Sheahan

Objective: Computed tomography (CT) is a commonly used modality for imaging of the neck in squamous cell carcinoma (SCC). The purpose of this study was to investigate the efficacy of CT in detecting nodal involvement at Level I in Head & Neck SCC.

Methods: Retrospective review of 307 patients with oral cavity SCC treated at our institution from 1996 to 2015. Preoperative CT imaging and post-operative pathology reports of all cases undergoing neck dissection as part of primary treatment were reviewed. Cases with pre-op imaging performed outside our institution were excluded from the study as were indeterminate pathology reports.

Results: Of the 307 cases, 265 cases underwent primary surgical treatment, of whom 167 underwent neck dissection. 60 of these were pathological node positive (pN+). 103 patients had both radiology and pathology reports available for correlation. The sensitivity of CT for level 1 involvement was 83.3% and the specificity was 95.9%. The positive predictive value was 83.3% and negative predictive value was 95.9%. Conclusions: The above results demonstrate good sensitivity and high specificity for CT in detecting Level I involvement in

Oral Cavity SCC and maybe useful in preoperative planning, however, inclusion of Level I in elective neck dissection remains gold standard in oral cancer.

1428 - 1436

**EXTRACAPSULAR SPREAD AND OTHER PROGNOSTIC FACTORS IN OROPHARYNGEAL SQUAMOUS CANCER: CONCUR OR NOT TO CONCUR?**

N. Kharytaniuk, P. Moloney, L. Feeley, S. Boyle, G O'Leary, P. Sheahan

---

**Objective:** The presence of extracapsular spread (ECS) in metastatic lymph nodes has traditionally been regarded a poor prognostic factor in oropharyngeal squamous cell cancer (OPSCC), irrespective of p16/Human Papilloma Virus (HPV) status, and an indicator for postoperative concurrent chemoradiotherapy. This has recently been questioned for p16-positive cases. We aimed to compare the effect of ECS on survival in p16-positive/p16-negative groups.

**Methods:** Retrospective analysis of all cases with primary OPSCC at our institution (2000-2014), with review of original pathology and p16-staining, was performed. Inclusion criteria for the present study were patients undergoing neck dissection as part of their initial treatment, with p16-staining available. Prognostic factors, including smoking history, p16-status, ECS and lymph nodal involvement, were recorded. The overall, disease-free and disease-specific survival rates were calculated.

**Results:** Sixty patients were included. Treatment of the primary tumour was: transoral resection (39), open resection (6), and (chemo-)radiotherapy (15). Five-year disease-specific survival was 65.7%. On univariate analysis, significant adverse prognostic factors were: p16-status ( $p < 0.0001$ ), smoking history ( $> 10$  pack-years) ( $p = 0.004$ ), ECS ( $p = 0.007$ ) and T3/T4-classification ( $p = 0.02$ ). On multivariate analysis, p16-status ( $p = 0.003$ ) and ECS ( $p = 0.03$ ) remained significant. Of 16 p16-positive patients with ECS, only one died from their cancer. ECS had no impact on survival ( $p = 0.77$ ) among p16-positive patients, whereas among p16-negative, ECS had a significant adverse impact on survival ( $p = 0.02$ ).

**Conclusions:** Our findings suggest that ECS does not significantly adversely affect survival in p16-positive OPSCC. Further study is required to determine whether ECS in p16-positive patients necessarily indicates postoperative chemoradiotherapy.

1436 - 1444

**IMPACT OF P16 STATUS AND COMORBIDITY ON PROGNOSIS IN TONGUE BASE SCC**

S. Boyle, G. O'Leary, L. Feeley, P. Moloney, N. Kharytaniuk, P. Sheehan

---

**Objective:** Squamous cell carcinoma (SCC) of the base of tongue (BOT) is traditionally associated with poor prognosis. Recently, many countries have reported an increase in Human Papilloma Virus (HPV) associated oropharynx cancer associated with better prognosis. Our objective was to investigate frequency of p16 positivity in an Irish cohort, and examine prognostic factors with special attention to p16 status and comorbidity. **Methods:** Retrospective review of all patients with BOT SCC at our institution over 10-year period. HPV status was determined by p16 staining. Comorbidity was scored by Charlson Comorbidity Index (CCI). **Results:** The final study population consisted of 47 patients (37 male) with mean age 60 years. Treatment was with chemoradiotherapy (31), radiotherapy alone (11) and transoral laser (2), and open surgery (3). p16 staining was performed in 38

patients and was positive in 21. 2-year and 5-year overall survival was 69% and 49% respectively. On univariate analysis, p16 status ( $p=0.02$ ) was a significant predictor of overall survival with CCI just outside significance ( $p=0.06$ ). On multivariate analysis, only p16 status was significant ( $p=0.03$ ). Conclusion: HPV-associated SCC of BOT is common in an Irish cohort and has improved survival compared to p16-negative cases.

1444 - 1452

#### A REVIEW OF LIP LESIONS IN A SINGLE CENTRE

C. Bartels, M. Donnelly

---

**Objective:** To carry out a review of all lip lesions excised in the past 5 years, looking at patient demographics, site, histology, malignancies, recurrences, adequacy of excision. The lip is a cosmetically highly important region, and also functionally important in speech, eating, and maintaining the enclosed oral environment.

**Methods:** A retrospective review was carried out of theatre histology log books, from present until 2009. Data collected included demographic data, site of lesion (upper or lower lip), histology, adequacy of excision and recurrences.

**Results:** There were 103 lip lesions excised between 2009-2015, from 99 patients. 84 of these were from the lower lip, and 14 from the upper lip, with 3 having no site specified. 53 of the 99 patients were male. There were 31 malignant lesions, of which 28 were SCCs, and 3 BCCs. All 3 BCCs were on the upper lip, whereas only 2 of 28 SCCs were found on the upper lip. In 3 cases, excision margins were inadequate. There were no documented recurrences in this time. 2 BCCs occurred in males, and 21 SCCs.

**Conclusions:** Lip lesions make up a significant proportion of an ENT team workload, with risk factors for development of malignancies including cigarette smoking, alcohol abuse, sun exposure and male gender. Our study publishes the experiences of one centre for the past 5 years. Lower lip lesions- benign or malignant present more commonly on the lower lip, SCCs are more common than BCCs. SCCs and BCCs are each more likely to occur in males.

1452 - 1500

#### ADULT PAROTID SURGERY: A REVIEW OF PATHOLOGY, MANAGEMENT AND OUTCOMES

J. Bradley, A. Kelly, B. Kelly, B. Hanna

---

**Objective:** Parotid tumours present the Head and Neck surgeon with a wide range of benign and malignant pathologies. The aim of our study was to review adult parotid surgery within our trust over a three year period.

**Methods:** A Retrospective Chart Review was carried out for Patients over the age of clinicopathological parameters, surgical technique, perioperative morbidity and mortality.

**Results:** The cohort included 91 patients with an age range of 20-90. 75% of surgery was for benign disease. As anticipated, superficial parotidectomy was the most common of the surgical procedures performed. Nerve monitoring was used for all surgery with an intact facial nerve pre-operatively. 22% of patients displayed facial nerve weakness post-operatively. Only 9% of patients had lasting weakness at most recent follow-up, of whom all had malignant disease. Seroma was the most common complication post-operatively. No patients reported Frey's Syndrome which is universally under reported in other retrospective studies. 3 patients went back to theatre for evacuation of haematoma and haemostasis. All patients had a drain post-operatively. There was no mortality reported. **Conclusion:** The results compare favourably with other published literature. Benign tumours account for 60-80% of parotid neoplasms which is reflected in our results. Pleomorphic adenoma was expectedly the most common pathology.

The incidence of post-operative complications was influenced by pathology with a higher incidence of documented complications involving malignant disease. The marginal mandibular branch of the facial nerve the most commonly affected post-operatively.

**1500 - 1530**

**Coffee Break (Poster Adjudication)**

Judges: Kieran O'Driscoll / tba

**1530 - 1715**

**CME - Frontiers in ORL**

Chairpersons: Ivan Keogh / Robin Adair

Evolution of image guided surgery  
David Kennedy, Philadelphia, USA

An introduction to endoscopic ear surgery  
Arunachalam Iyer, Glasgow, UK

Minimally invasive parathyroidectomy  
Shahed Quraishi, Doncaster, UK

Minor salivary gland neoplasms  
Patrick J Bradley, Nottingham, UK

Sinus balloon dilation technology,  
clinical use and evolution  
Peter Baptista, Navarra, Spain

Magnifying NBI endoscopy in laryngology  
Professor. Petr Lukes, Prague, Czechoslovakia

The ENT Masterclass® Story  
Shahed Quraishi, Doncaster, UK

**1900 - 2000**

**Drinks Reception**

**2000 - 2230**

**Wilde Discourse:**

**“Reflections on Paediatric Airway, setting the standard”**

Prof. Robin T Cotton / Cincinnati, USA

Followed by:

**Gala Dinner (Black Tie) / President's speech**

## Saturday 10<sup>th</sup> October

**0800 - 0850 Meeting - Irish Institute of Otolaryngology (IIOHNS)**

**0900 - 1020 Free Paper Session 4 (Paediatrics + General)**

Chairpersons: Peter Lacy / tba

0900 - 0908 SAFETY THROUGH SIMULATION: EVIDENCE AND EXPERIENCE IN ENT

K. Conroy, B. Yu, L. Oliver, V. Malik, P. Hans, J. Abbass, C. Williams

---

Introduction: Lack of exposure to ENT during medical school and increasing demands of cross-specialty cover out of hours can leave junior staff unequipped to deal with ENT emergencies whilst on call. Middle grade doctors may be off-site. Therefore, it is imperative that junior doctors are proficient in basic ENT emergency management skills in order to provide a safe and high quality patient care. Simulation is now increasingly recognised as an efficient and effective method of training. We present the impact of a simulation-based induction for our junior doctors, and review the literature. Methods: A review of literature was performed to understand role of simulation in ENT training. Junior trainees, commencing ENT cross-cover, rated their confidence in dealing with common ENT emergencies (e.g. airway emergencies, epistaxis, and assessing an ear) on a 10-point scale. Simulation based practical induction course was introduced. Trainee feedback was collected after the hands-on training and audit cycle completed. This was repeated over 3 courses in total. Results: Trainees confidence in managing common ENT emergencies significantly improved following hands-on simulation based training. Most remarkable improvement of 5.8 points (out of 10) was seen in airway management skills followed by improvement of 4.6 points per trainee in management of epistaxis. Conclusion: Carefully prepared, evidence-based simulation courses combined with quality feedback can improve trainees' ENT skills in a relatively short period of time, and are an effective way of improving patient safety out of hours.

0908 - 0916 PAEDIATRIC MICRODEBRIDER-ASSISTED POWERED INTRACAPSULAR TONSILLECTOMY (TONSILLOTOMY) +/- ADENOIDECTOMY FOR THE TREATMENT OF TONSILLITIS AND OBSTRUCTIVE SLEEP APNOEA.

R. B. Speaker, P. Casserly, S. Hone, J. Russell

---

Introduction: Subtotal Intracapsular Tonsillectomy (SIPT) or Tonsillotomy is described as being associated with less morbidity than traditional tonsillectomy. Several techniques have been employed to reduce the volume of tonsil tissue and minimize complications. Microdebrider powered intracapsular tonsillotomy (PIT) is associated with a low rate of hemorrhage and a relatively mild learning curve. We present our data on the safety and efficacy of PIT in a paediatric population. Materials and methods A retrospective chart review of patients who underwent microdebrider-assisted tonsillotomy (with or without adenoidectomy), over a 6 year period, was performed. Patient demographics, comorbidities, indications for surgery, grade of surgeon, and complications including Return to theatre

(RTT) rates were recorded. Results 409 patients underwent PIT +/- adenoidectomy during the study period. Common indications for surgery were Obstructive sleep apnoea (n=175) and recurrent tonsillitis (n=234). Mean patient age was 4.7 years (range 1.2 – 18 years). Mean weight was 19Kg (range 8-83 Kg). The incidence of Primary post-tonsillotomy hemorrhage was 0.24% (RTT 100%) and the incidence of secondary hemorrhage was .9% (RTT 0%). The rate of tonsillar regrowth was 2.5%. There was no difference in outcome between patients associated with a those operated on by consultant vs Trainees. Conclusion This is a large single center studies of tonsillotomy in the literature. PIT is safe and effective surgical technique for the treatment of OSA and recurrent tonsillitis which in particular should be considered in low weight patients or those patients with significant comorbidities.

0916 - 0924

A FIVE YEAR EXPERIENCE OF MASTOIDITIS IN A  
PAEDIATRIC AND ADULT POPULATION AT TALLAGHT  
HOSPITAL.

A. White-Gibson, F. O'Duffy, J. Kinsella.

---

Objectives: Acute mastoiditis has become increasingly more common in the general population. Careful diagnostics and early management is required to promote adequate treatment. We reviewed our experience of mastoiditis over the past 5 years in the adult and paediatric population in Tallaght hospital in the midst of a broadening application of imaging.

Methods: We reviewed all medical records of children (< 18 years of age) and adults diagnosed with mastoiditis between June 2000 and June 2015. Diagnosis of mastoiditis was based on clinical features and confirmed by imaging studies. We compared the clinical and radiological features of acute and chronic mastoiditis in our patient demographic. Results: A total of 44 patients were included, 33 paediatric cases and 11 adult cases over a five year period. CT MR scans were found to be highly sensitive. In 88% of cases the radiological diagnosis was correct however in 12% of cases the radiological report over- called the diagnosis. 16% of cases were classified as chronic mastoiditis and 71% of these occurred in the paediatric demographic.

Conclusions: With the application of imaging studies, many cases of mastoiditis were identified in this patient population. The use of clinical diagnostics and imaging techniques for correlation proved most effective in the accurate diagnosis of this condition. Each method isolated showed the potentially or under-calling (in the case of clinical methods alone) or over-calling (in the case of radiological methods alone). Our findings support the routine use of computerized tomography in the diagnosis of mastoiditis.

0924 - 0932

IS IT TIME FOR A UNIFIED OTORHINOLARYNGOLOGY  
UNDERGRADUATE CURRICULUM IN IRELAND?

D. Hogan R. McConn Walsh, I. Keogh, JP. O'Neill

---

Objective: A joint RCSI and NUIG initiative to produce a unified curriculum document for the provision of undergraduate teaching in Otorhinolaryngology. The aspiration of which will be a unified otorhinolaryngology curricula throughout all Irish medical schools. Methods: A 30 year literature search using pubmed from 1985-2015, with no restriction other than English language, was used to gather studies detailing undergraduate teaching methods and curricula in otorhinolaryngology. There were no ethical considerations regarding this study. Results: Literature regarding the gold standard for undergraduate education in otorhinolaryngology is relatively sparse, but certainly the amount of teaching dedicated to

otorhinolaryngology in undergraduate medical education is lacking in duration, outcome and standardization. Conclusions: From the perspective of ENT as a specialty, it is advantageous to be strongly represented in medical school curricula. Enriching otolaryngology teaching is also essential to optimize primary care delivered to patients. We feel that this is an exciting opportunity to produce a unified curriculum document for the provision of undergraduate teaching in otorhinolaryngology in Ireland with input and agreement from all major stakeholders.

0932 - 0940                      DELAYED DISCHARGES IN A REGIONAL HEAD AND NECK  
UNIT - CAUSE AND EFFECT  
F. Toner, R. Ullah

---

Objective: To assess the extent to which beds in our regional Head and Neck unit are being 'blocked' by long-term inpatients with complex social issues. Also to identify common causes for delayed discharges and what changes can be made to reduce such delays.

Methods: This was a retrospective study the hospital PAS system was interrogated and all patients admitted during a 9 month period found. Patients with long hospital stays define eg > 28days identified and their charts reviewed to ascertain reasons for length of stay.

Results: A 9 month period was examined (a total of 3030 bed-days). Out of 1168 individual patient admissions, 20 patients were found to have a total stay >4weeks (28days) These 20 patients had a combined length of stay of 1094 days, an average of 55 days, this equals 36.1% of the total number of days in this 9 month period. Common causes for delays outside of medical reasons were social delays e.g community nursing care, lack of suitable nursing/residential homes to deal with Head and Neck patients.

Conclusions: Our results showed that in this 9 month period 1.7% of the patients admitted to our Head and Neck unit accounted for over 30% of our bed-days. This is clearly a significant burden on our service with negative effects on bed utilisation and waiting-lists. There are also implications for these delayed patients, with a prolonged stay in an inappropriate clinical environment

0940 - 0948                      EDUCATION IN ENT: 3D MODELLING AND STEROSCOPY FOR  
EVERYONE.  
S.Meghji, T.Kanzara, P.Surda, M.Barnes

---

Objectives: Leonardo da Vinci in 1503 painted the Mona Lisa. A second, nearly identical painting was produced by da Vinci or his student and is now held at Prado Museum. Together the two paintings are thought to represent the first stereoscopic 3D image. Over 500 years later, there have been multiple attempts to achieve high quality stereoscopic 3D images. SurgTech, a non-profit association, mainly of surgeons, has been harnessing the latest technologies in order to bring 3D and other innovative learning materials into surgical education.

Methods: We have developed solutions for us all to easily and economically create 3D models and present them and other materials stereoscopically. Methods of presentation include anaglyph (red/blue) glasses, or modern 3D viewing devices using side by side polarized light, shutter technologies or lenticular displays. Models can be developed from 3D medical imaging, laser scans or photogrammetry. We have some great media examples, including 3D models based on the human temporal bone and sinuses. 3D prints of these models open up new teaching and learning experiences.

Results: SurgTech.net are establishing a public library of 2D and 3D stills, videos and models. This is all available for anyone to learn or teach from, edit, redistribute or print. Current projects include stereoscopic virtual endoscopy, 3D HD nasendoscopy and much more.

Conclusions: We have introduced a new dimension to teaching in surgical anatomy and operative techniques. We would like to showcase this to you.

0948 - 0956                      REVISION COCHLEAR IMPLANTATION: INDICATIONS,  
OUTCOME AND PREDICTORS  
C. Wijaya, C. Simões-Franklin, F. Glynn, P. Walshe,  
L. Viani

---

Objective: To categorise indications for revision cochlear implant surgery, to analyse performance outcomes following re-implantation, and to identify objective measures, which predict cochlear implant failure.

Methods: Centralised database, medical charts, surgical records, integrity tests, and manufacturer's device analysis for all patients who underwent revision surgery in Ireland were retrospectively reviewed. Pre- and post-re-implantation speech and auditory performance indicators were analysed to assess the impact on language development. Results 33 children and 17 adult patients, who underwent revision surgery, were identified between March 1995 and January 2015. Commonest indications for explantation surgery were device failure, infection and device migration or extrusion. Analysis of post-revision surgery speech and auditory performance indicators had shown positive impacts.

Conclusion: Revision cochlear implant surgery results in positive impact on language development.

0956 - 1004                      #IMINWORKJEREMY: MAKING ENT WEEKEND WORK WORK  
M. Moran, D. Dick, JEA. Wauchope, C, Gregg, S. Hampton

---

Objectives: Assessing and improving weekend handover in a tertiary ENT/Head and Neck Surgery unit with focus on improving patient care. Methods: 112 patients were included in this study, which audited pre-weekend handover information and routine work carried out at weekends. Doctors at the time of survey were blinded, with knowledge of a coordinating consultant. 8 data points were investigated, including: diagnosis, resuscitation status, thromboprophylaxis, routine bloods, action plan, IV access, drug chart review and estimated discharge date A pro-forma was then developed (using the mnemonic DR TB AIDE) and used on Friday ward rounds. Results: The introduction of an aide memoire for handover resulted in less routine work for the emergency weekend on call team. The DR T B AIDE tool improved recording of a detailed weekend plan from 71% to 95%, and the discharge planning documentation improved from just 12% to 67%. Information on the need for specific blood tests increased by 49% (from 30 to 79%). It was also of note that the inclusion of resuscitation status prompted more open discussion of this. An increase in resuscitation documentation of 82% was noted. Conclusions: Providing continuity of care in ENT units can be difficult at the weekend due to cross-covering teams and subspecialty division of labour (Head & Neck/ ENT). This novel tool provides a free and simple platform for improving handover communication, patient safety and quality of care. It has also proved useful more generally in making end of life discussion a more routine part of our practice.

1004 - 1012

**SURGTECH.NET: A NETWORK OF EXPERT  
ENT TUITION**

S. Meghji, T. Kanzara, P. Surda & M. Barnes

---

**Objective:** Digital media is the next big thing in surgical education. This media extends the frontiers of knowledge for all surgeons of different grades and abilities. SurgTech, a non-profit association, of surgeons and others, is working to make the latest innovations in digital media accessible to surgeons. It is a great new source of innovative educational materials and is free to the end user.

**Methods:** Our emphasis is on producing high quality teaching materials to encompass surgical techniques and anatomy. We have a range of 2D and 3D stills, and operative tutorials in our atlas of rhinology. We have produced a 3D model of the human sinuses based on a MicroCT, and we are currently developing a 3D dissection manual of the temporal bone. We also deliver educational assistance to developing countries through our Outreach program.

**Results:** Our content is freely accessible and available to learn, teach, edit, redistribute or print given due attribution to the original authors and SurgTech.net. Coming soon are the atlas of otology, atlas of head and neck, paediatric endoscopy manual and a 3D temporal bone dissection manual. We are adding stereoscopic virtual endoscopy, 3D HD nasendoscopy and more media developments soon.

**Conclusion:** Working together as a non-profit network of expert ENT tuition, we can all benefit from these exciting developments.

1012 - 1020

**A CADAVERIC NEUROANATOMICAL STUDY OF THE ADULT  
LARYNX.**

G. Thong, R. Pena, C. Gilgannon, P. Dockery, N. Patil

---

**Objective:** Iatrogenic recurrent laryngeal nerve (RLN) injury represents a devastating and difficult to treat complication of thyroid surgery. Better understanding of the complex innervation of the intrinsic muscles of the larynx may lead to targeted and successful treatment modalities. Previous studies have shown the intrinsic muscles of the larynx to have large variation in muscle fibre size when compared to skeletal muscle. They are also particularly susceptible to denervation followed by partial reinnervation to varying degrees. Semon's Law dictates that a transected RLN will affect adductors and abductors equally whereas a traumatised nerve will spare adductors preferentially. Several theories exist attempting to explain this yet none has been proven. This study attempted to describe histological differences between the adductors and abductors to explain this phenomenon.

**Methods:** 4 cadaveric adult hemilarynxes were obtained and fixed with formaldehyde. Haematoxylin and eosin staining was performed to define anatomical structures. Sides were examined under direct microscopy

**Results:** 3 thyroarytenoid and 2 posterior cricoarytenoid (PCA) muscles were obtained. The thyroarytenoid muscle was more densely innervated (m=27) in comparison to the PCA (m=1) per 10mm sections.

**Conclusions:** The more dense innervation of the thyroarytenoid muscle is reflective of its diverse structure and function compared to the PCA. This extra mass may provide protection from crushing trauma intraoperatively and explain the phenomenon of Semon's Law. More detailed understanding of the neuroanatomy of the larynx may contribute to targeted treatment advances in conditions such as RLN injury.

- 1020 - 1130**                    **CME Session 2 – (Paediatrics)**  
Chairpersons: Keith Trimble / Helena Rowley
- Principles of paediatric FESS  
Maximilian Traxdorf, Erlangen, Germany
- Management of the paediatric airway  
Mike Rothera, Manchester, UK
- Emergency paediatric ENT  
Panel: Mike Rothera, Conor Jackson, Stephen Kieran
- 1130 - 1200**                    **Coffee Break**
- 1200 - 1300**                    **CME Session 3 – (Paediatrics)**  
Chairpersons: Helena Rowley / Keith Trimble
- Albatross cases presented by:  
John Russell, Ray Clarke, Tadhg O'Dwyer, Mike Rothera
- 1300 - 1330**                    **CME Session 4**  
Chairpersons: Nash Patil / tba
- Treatment progress in rhinology  
David Kennedy, Philadelphia, USA
- 1330 - 1340**                    **Closing Speeches / Best Paper / Poster Prizes**
- 1400 - 1600**                    **IOTA Session - Meet the Trainers**  
Chairpersons: Eadaoin O’Cathain / Michael Moran  
Myles Black (Northern Ireland Training Director) will be in attendance
- Getting into a programme in the USA – David Kennedy  
My Fellowship experience - Paula Casserly  
Tips and pearls for paediatrics at the Intercollegiate examination -  
Mike Rothera
- Clinical Skills Workshops – Medtronic + Olympus**
- 1600 – 1630**                    **NEAG Meeting**

## Posters

### **A PERILOUS ODYSSEY FROM NO WHERE TO NOW HERE AND BEYOND**

*K.B.Bali, I.Nibelle, A.S.Nakshabandi*

*Al Ain, United Arab Emirates.*

---

Background- Otoscopy has come a long way from its humble beginnings to the current modern age. History- Historically, since body orifices provided conduits to the interior, otoscopy was used to examine the inside of the ear. Initially, ear examinations were done under direct sunlight. Due to its obvious limitations, modifications with mirrors (and multiple types of ear speculums) used reflected light to provide a natural improved way to visualize the ears. Further Progress- In due course, electrical and battery operated otoscopes were invented to harness the power of artificial light for ear examinations. With introduction of magnification, otoscopes could not only visualize the finer details of the inner ear but be used for minor ear surgery. The Future- The future of ear examination lies in robotic and capsular otoscopy.

Conclusion- This epic historical journey of otoscopy: with its ups and down: helps us to appreciate its impact on modern knowledge of ear diseases, ear surgery, on the ear surgeon and on patients care.

References 1. The Otoscope. *The American Journal of Gastroenterology*; 2002: 97, 470. 2. *Otology Through the Ages Otolaryngology. Head and Neck Surgery*; 1996 114: 173-196.

### **ANATOMIC STUDY OF THE TEMPOROPARIETAL AND OCCIPITAL FASCIAL FLAPS WITH CLINICAL IMPLICATIONS FOR COMPLEX AURICULAR RECONSTRUCTION**

*T. Ramachandra, S. Fernando, WR. Ries, J. Reinisch, S. Stephan*

*Beaumont Hospital, Dublin 9.*

---

Objectives: Fascial flaps from the temporoparietal (TP) and occipital (OC) regions are commonly used in congenital, traumatic, and post-oncologic auricular reconstruction. In particular, the PA and OC flaps can be useful in salvage procedures for small and large reconstructions. While the arterial anatomy of these flaps is well documented, there is variability of their venous outflow patterns and limited information in the literature. We explored the anatomic considerations of these flaps and the implications upon surgical approach, flap design, and clinical indications. Study Design and Methods An anatomic study of 10 fresh latex-injected cadaver heads was performed (N=20 of each flap). The primary vascular patterns for each fascial region were documented, as well as pertinent landmarks useful during surgical dissection of each flap. Results Arterial anatomy for the fascial regions was consistent in both dominant supply as well as location of the main arterial trunks and primary branches. Arterial arcades of the primary terminal branches in the TP and OC flaps were present at discrete distances from the external auditory canal and other proposed anatomic landmarks. Venous outflow showed considerable variability in each fascial region. Venous outflow for the OC region exited to separate fascial planes, yielding clinical implications for the pedicle mobility and thickness.

Conclusions: We describe the potential flap designs, arcs of rotation, and pedicle lengths for TP and OC fascial flaps with special attention to microtia reconstruction using the TP and OC flaps. We also provide a framework by which clinicians can optimally utilize the strengths of each flap.

## **CONGENITAL CYTOMEGALOVIRUS SENSORINEURAL HEARING LOSS**

*A W. Hoey, I. Pai, E. Wraige, S. Connor, A. Bamford and D. Jiang  
London, United Kingdom.*

---

**Introduction:** Congenital Cytomegalovirus (cCMV) is a well-defined cause for neonatal mortality and morbidity - particularly as a cause of sensorineural hearing loss and other neurodevelopmental disruption. We present a retrospective study which provides an overview of the assessment and preoperative work up for patient diagnosed with cCMV and their cochlear implant outcomes. We also discuss the latest developments in multidisciplinary management of these patients.

**Methods:** We assessed all children with cCMV who underwent cochlear implants insertion at our institution from 2010 to 2015. We analysed their preoperative imaging and audiology as well as their neurological assessment. Cochlear implant outcomes were measured using age-appropriate hearing tests. **RESULTS** Patients had an average age of 2.1 years at assessment and 4.0 at implantation. 18% received left-sided implants only, 55% bilaterally in the same surgery and 27% performed sequentially (with an average delay between implants of 5.97 years). 45% of patients suffered severe to profound hearing loss and 55% had bilateral profound hearing loss at initial assessment. All patients showed a significant improvement in hearing test outcomes (average CAP and SIR scale improvement 4.5 and 2.5 points, respectively). 36% of patients had associated neurological co-morbidities ranging from balance issues to cerebral palsy and 27% of patients also suffering some degree of neurocognitive dysfunction.

**Conclusion:** While overall cochlear implant outcomes were mixed, all children benefited. Importantly, our data also highlights the significant neurodevelopmental comorbidities associated with cCMV. With the recent developments in medical treatment, this underlines the importance of multidisciplinary management of these patients.

## **A COMPRESSIBILITY STUDY OF CADAVERIC MIDDLE EAR TISSUE USING TWO DIFFERENT PRESERVATION METHODS**

*A. Gyan Baffour , P. McGarry , N. Patil  
Sligo General Hospital, Sligo.*

---

**Objective:** Cadavers are used for various hands on training courses, including temporal bone dissection. To date, all anatomy departments in the country have used a standard method for processing such bodies, which often leads to the tissue becoming stiff and difficult to manipulate. NUIG has recently introduced a novel technique to process their cadavers to enhance suppleness. **Methods:** We worked in association with Professor Dockery's team at the laboratory in Galway to harvest middle ear tissue from both standard and new specimens, and submitted them to compressibility studies to check their resilience. **Results/Conclusions:** The aim of the exercise was to determine if the new process translated into better handling of the middle ear cleft, which would allow for a improved trainee experience during temporal bone dissection.

## **IN TOO DEEP? CONSIDERING ENT IN HYPERBARIC OXYGEN DECOMPRESSION THERAPY**

*MJ. Williams, M. Moran, J. Wauchope, M. Korda, SJ. Hall  
Portadown, Northern Ireland.*

---

**Objectives:** Ascertain frequency of ENT-related symptoms/signs at time of admission of divers with illness related to decompression at a tertiary referral centre for hyperbaric treatment. Determine number of patients admitted with decompression sickness who had audiometric assessment. Describe management of diving related ENT illnesses, particularly highlighting inner ear decompression sickness as a distinct clinical entity from diving related barotraumas. Improve future assessment of divers admitted for decompression sickness

**Methods:** Retrospective case series of all patients admitted to a tertiary referral centre between September 2007 and August 2015 for consideration of hyperbaric oxygen decompression therapy (HODT). Case note review was carried out, as well as review of audiometric testing if relevant. **Results:** 30 patients were admitted for HODT, of which only a small proportion had audiometric testing. There was a low rate of referral for review of ENT symptoms, and the documentation of ENT symptoms at the time of admission was variable. A case of inner ear decompression sickness in a patient with a patent foramen ovale is highlighted.

**Conclusions:** As sports diving becomes ever more popular, the uncommon inner ear diving injury may be seen with increasing frequency. If mismanaged, the outcome of inner ear decompression sickness can lead to considerable debilitation. Specific ENT-related screening questions should be posed to all patients admitted for HODT, in order to trigger prompt specialist referral and to identify patients in whom decompression treatment is contraindicated. This is especially important in a tertiary referral centre, and a role for a referral pathway is proposed.

## **AUDIOLOGICAL OUTCOMES OF INCO-STAPEDIAL OSSICULOPLASTY WITH HYDROXYAPATITE**

*C. Brophy, CB. Heffernan, S. Kieran  
Mater University Hospital, Dublin 7.*

---

**Introduction:** Ossicular erosion secondary to chronic otitis media is often confined to the long process of incus. In such cases reconstruction of the inco-stapedial joint rather than incus removal with subsequent incus interposition or placement of synthetic partial ossicular reconstruction prosthesis (PORP) may be possible.

**Objective:** The objective of this study is to report the audiological outcomes for inco-stapedial joint reconstruction using Hydroxyapatite cement. **METHODS** Case series of seven patients

**Results:** Seven patients underwent inco-stapedial reconstruction with hydroxyapatite since January 2013. Four were male. Three were female. Four underwent concomitant tympanoplasty and three underwent combined approach tympanoplasty. Audiograms taken preoperatively and one year post surgery were analysed in relation to pre and postoperative air and bone conduction values at 250, 500, 1000, 2000, 4000 and 8000Hz. We measured our outcomes by the change in pre and post air-bone gap as well the change in high tone air conduction level in dB at 250, 1000 and 2000. We demonstrated significant improvement in both reduction of the air-bone gap as well as overall improvement in air conduction.

**Conclusion:** Hydroxyapatite cement is a viable alternative to both incus interposition and PORP placement in patients with isolated erosion of the long process of incus.

## **THE USE OF SINGLE APPLICATION PROPHYLACTIC EAR DROPS AT THE TIME OF BILATERAL MYRINGOTOMY AND VENT INSERTION FOR REDUCTION IN POST-OPERATIVE INFECTIONS**

*JGF. Smith*

*Co.Antrim, Northern Ireland.*

---

**Objective:** A meta-analysis published in April 2013 by Syed, Suller et al, suggested that there may be some benefit to the single use of prophylactic ear drops at the time of surgery for bilateral myringotomy and vent insertion. This retrospective audit aimed to discover whether a similar improvement in the incidence of infection was experienced in a local population, and to assess whether this may be an appropriate management option in the future.

**Methods:** Charts of 288 patients with vent insertion between June 2013 and June 2015 were reviewed. Patients who had received ear drops during surgery for a reason other than prophylaxis were excluded. The use of prophylactic drops was recorded by review of operative notes and the appearance of post-operative infection monitored by use of the first post-operative review letter, noting mention of infection or otorrhoea.

**Results:** Following further exclusion criteria, 128 patients had bilateral vent insertion without use of ear drops at the time of insertion, with 19 showing evidence of infection; a post-operative infection rate of 14.8%. 69 patients were given a single application of ear drops at the time of insertion with only 2 patients reporting evidence of infection; a much reduced 2.9%.

**Conclusions:** In conclusion, this retrospective audit shows a reduction in incidence of post-operative infection in a local population with the use of a single application of prophylactic ear drops at the time of bilateral myringotomy and vent insertion. It may therefore indicate some merit in its application in future management.

## **RECURRENT PLEOMORPHIC ADENOMAS: A SINGLE SURGEONS EXPERIENCE OVER 15 YEARS**

*E. Keane, P. Lennon, S. Brennan, J. Kinsella, CV. Timon*  
*Sligo Regional Hospital, Sligo.*

---

**Objective** Pleomorphic adenoma is the most common parotid neoplasm, which has a propensity to recur after suboptimal resection. Management of recurrent pleomorphic adenoma can be problematic in terms of technically challenging surgery and increased risk of potential complications. The aim of our study was to assess a single surgeon's experience with the management of such cases and any complications thereafter.

**Methods:** A retrospective review of a single surgeon's experience regarding the management of recurrent pleomorphic adenoma from 1999 to 2015.

**Results:** 21 patients with recurrent parotid masses were identified, 12 female and 9 male. 20 were histologically confirmed as pleomorphic adenoma. Of these, 5 patients had an enucleation as their primary surgery. For 2 patients, this was a second recurrence. 6 patients had adjuvant radiotherapy as part of their management, with a low complication rate. 2 patients required temporal bone dissection intraoperatively, and 6 patients developed facial nerve palsy post operatively. 3 of these did not fully resolve. No cases of carcinoma ex-pleo were identified and no patient developed a subsequent recurrence. The mean follow up time was 7 years.

Conclusions: Recurrent pleomorphic adenoma represents a challenge to both the patient and the surgeon. Injury to the facial nerve is more common in this cohort of patients. To adequately assess the re-recurrence rate, follow up should be for at least 10 years. The role of radiotherapy remains controversial.

## **VOCAL TRACT TREMOR IN PARKINSONS DISEASE**

*P. Gillivan-Murphy, M. Colreavy*

*Mater University Hospital, Dublin 7.*

Objective: Voice impairment is salient in people with Parkinson's disease (pwPD) and leads to voice disability. Tremulous voice quality is associated with PD. Although studies have identified laryngeal tremor in PD, none have systematically evaluated tremor in the vocal tract during different speech tasks. The aim of the study was to identify, and rate severity of vocal tract tremor in pwPD.

Methods: Using flexible nasendoscopy, thirty consecutive pwPD (22 males; mean age  $\hat{A}\pm$  standard deviation (SD), 61.40 (10.31); mean disease duration  $\hat{A}\pm$  SD 5.23 (3.17), and twenty eight healthy age-sex matched controls were evaluated for tremor movement in the palate, tongue base, and larynx during tasks (rest breathing, /s/, /a/, /i/) On a rating scale of 0-3 (0=absent, 1= mild/intermittent tremulous movement, 2= moderate tremulous movement, 3= severe tremulous movement), raters independently rated tremor movement from silent digital video files. The Voice Handicap Index (VHI) measured voice disability.

Results: Inter rater reliability (ICC) ranged from good (0.8) to moderate (0.5) for tremor rating. PwPD had a greater amount of tremor in the palate, tongue, and larynx relative to controls ( $p<0.05$ ). The palate achieved the highest tremor severity rating relative to the tongue and larynx. VHI scores were higher in pwPD than controls ( $p<0.05$ ).

Conclusions: This is the first study to take a 'vocal tract' perspective on PD voice tremor and to show that palatal tremor is a feature of PD. Flexible endoscopic evaluation of the vocal tract during different speech tasks results in greater understanding of phonatory dysfunction in pwPD.

## **THE VOLUME-OUTCOME RELATIONSHIP IN THYROID SURGERY – A SYSTEMATIC REVIEW**

*C. Fitzgerald, C. Timon*

*St James Hospital, Dublin 8.*

Objective: A relationship between surgeon or hospital case volumes and outcomes for patients undergoing surgery is well-established for certain procedures. To date, no systematic review of studies of the volume-outcome relationship in thyroid surgery has been performed. The aim of this study is to systematically assess the impact of a high-volume surgeon or hospital on outcomes for patients undergoing thyroid surgery.

Methods: A systematic review was performed using MOOSE reporting guidelines. A systematic literature search was performed to identify studies pertaining to the volume-outcome relationship in thyroid surgery. Primary outcomes were post-operative hypoparathyroidism, recurrent laryngeal nerve damage and haemorrhage. Secondary outcomes were wound infection, pulmonary complications and mortality. Statistical analysis was completed using Review Manager 5 (RevMan, version 5.2.11). The Cochrane Handbook for Systematic Reviews of Interventions was used to provide a suggested structure for presentation of results.

Results: A broad literature search yielded 4,355 results. 7 studies met defined inclusion criteria. 4 studies described surgeon-volume outcomes, while 3 studies described hospital-volume outcomes. 2 studies used a prospective design, while 5 studies were retrospective. Variation was noted in defined thresholds for low/high volumes of surgery, indication for thyroid surgery, single versus multicentre study design, data source and overall study methodological quality, necessitating a narrative analysis rather than weighted meta-analysis. A trend favouring high-volume practice was noted in all primary and secondary outcomes. Conclusion: A trend is noted favouring high volume surgical practice in thyroid surgery.

### **IMPACT OF CURRENT SMOKING AND ALCOHOL ON GASTROSTOMY DURATION IN PATIENTS WITH HEAD AND NECK CANCER UNDERGOING DEFINITIVE CHEMORADIOTHERAPY**

*R. O'Shea MB, H. Byrne BSc, E. Taylor BSc, J. Tuckett MB, G. O'Leary MB, FRCSI, P. Sheahan MB MD FRCSI (ORL-HNS)  
South Infirmary Hospital, Cork.*

Objective: The benefits of prophylactic gastrostomy insertion continue to be a source of debate within the realm of head and neck surgery. This project aimed to identify modifiable risk factors which could also contribute to gastrostomy dependence, with a special focus on smoking and alcohol consumption as cofactors.

Methods: retrospective case study of all patients presenting with newly diagnosed squamous cell carcinoma of the aerodigestive tract undergoing primary radiotherapy or primary chemoradiotherapy undergoing prophylactic gastrostomy insertion at our institution between 2009 and 2012. The impact of variables on gastrostomy durations was studied using survival analysis using Kaplan-Meier method and Cox regression modelling. Among patients not undergoing gastrostomy removal, cases were censored at the date of last follow-up, date of death, or date of locoregional recurrence of cancer with gastrostomy. Results: study population consisted of 104 patients. The median duration of gastrostomy after completion of treatment was 9 months (mean 9.8 mo). The 6 and 12 month actuarial rates of gastrostomy were 60% and 35% respectively. Current heavy alcohol consumption and current smoking were significant predictors of gastrostomy duration on univariate analysis. Multivariate analysis showed current smoking as only significant factor.

Conclusions: we report a high incidence of persistent gastrostomy at 6 and 12 months post completion of treatment. Current smoking and alcohol consumption appeared to be risk factors for prolonged gastrostomy duration. Further study is required to determine whether smoking or alcohol cessation prior to treatment may lessen gastrostomy duration.

### **THE DEVELOPMENT OF UNIQUE GOLD TETRAPOD NANOSTARS TO IMPROVE SERS AND AID IN THE EARLY DIAGNOSIS OF SQUAMOUS CELL CARCINOMA."**

*K. Davies, J. Cai, V. Raghavan, P. Dockery, H. Fan, M. Olivo, I. Keogh  
University Hospital, Galway.*

Objective: Recently the application of surface enhanced Raman spectroscopy (SERS) in bio imaging for early cancer diagnosis has attracted much attention. The SERS signal is strongly associated with the localized surface plasmon resonance (LSPR) property of noble metal nanoparticles usually in the form of a gold nanoprobe. Essentially, SERS nanoprobe are conducted by attaching Raman active molecules to the surface of gold nanoparticles.

**Method:** In this study, we prepared a series of tetrapod gold nanocrystals with tunable LSPR intensity by sequentially adjusting reaction conditions of gold nanocrystals in a buffered acid solution. **Results:** Branched gold seeds were grown by a modified solution growth approach using the common Good's buffer EPPS. First forming tiny gold nanocrystals that subsequently branch to tetrapods, documented by transmission electron microscopy showing 75% uptake. We further report the effect of reaction parameters such as buffer concentration, pH and temperature on the LSPR of branched gold seeds. Our findings report that EPPS concentration volumes between 6-11mls, at a pH between 6-9 and at temperatures between 4-35 degrees, were capable of tuning the LSPR to the near infrared region. Thereby facilitating SERS bio-imaging applications specifically in the diagnosis of head and neck squamous cell carcinoma

**Conclusion:** In summary, the presented method can achieve precise modulation of LSPR peaks of tetrapod gold nanocrystals from 650nm to 785nm by using varying reaction parameters. Besides facilitating improved SERS signals, these nanoprobe also demonstrate stability and biocompatibility. Indicating their excellent potential for in vivo bio imaging, aiding cancer diagnostics.

## **PRELIMINARY STUDY OF JUNCTIONAL BIOMARKERS AND IMMUNE EVASION IN HUMAN PAPILOMAVIRUS-RELATED OROPHARYNGEAL SQUAMOUS CELL CARCINOMA**

*Rsr. Woods, E. O'Regan, M. Toner, S. Kennedy, CM. Martin, JJ O'Leary,*

*CV. Timon*

*St James's Hospital, Dublin 8.*

---

**Objective:** There are clear similarities of HPV-related oropharyngeal SCC to the cervix and mechanisms of immune evasion are poorly understood. We carry out a preliminary study on the expression of biomarkers of immune evasion and translation of cervical SCC junctional biomarkers to HPV-related oropharyngeal tumours.

**Methods:** HPV-positive tumour specimens and epidemiological data were collected from patients presenting with new primary oropharyngeal SCC at two head and neck centres over one year. Briefly, DNA was extracted from tissue blocks and HPV testing carried out using SPF10 HPV PCR. The INNO-LiPA HPV Genotyping Extra test [Fujirebio] was used to determine genotype. Immunohistochemical staining for CK7, GDA, MMP-7, AGR-2, PD-1 and PD-L1 was performed on tissue blocks by hand or Ventana Bench Mark XT immunostainer. Analysis was by light microscopy using the H scoring system. Expression was correlated with tumour, clinical and epidemiological data using SPSS. **RESULTS:** Sixteen HPV-related oropharyngeal SCCs were included and five HPV-negative specimens also stained. 15/16 demonstrated p16ink4a positivity. HPV-16 (16 cases), 33 (1 case) and 44 (1 case) were identified. Junctional biomarkers were expressed in tonsil crypt epithelium and to varying degrees in tumour specimens. Expression of PD-1 (13 cases) and its ligand (14 cases) were interpreted qualitatively, based on expression pattern, often presenting at the periphery of tumour islands.

**Conclusions:** Markers appear to selectively express in tonsillar crypt cells associated with HPV infection and correlate with cells in the cervix where top-down differentiation in SCC occurs. The PD-1:PD-L1 immune checkpoint pathway may play a role in immune evasion.

## **PENETRATING NECK INJURIES: THE POINT OF PLAIN FILMS**

*Hope, N. Gray, G. Lesay, M. Reddy, E  
Belfast, Northern Ireland.*

---

History a 27 year old male attended the emergency department having sustained a penetrating injury to the neck. The ENT team reviewed him promptly. Examination In the resuscitation room he was rapidly assessed. Full neurological and cardiovascular evaluation was normal. On examination a large metal nail could be seen entering level II of the neck. Given the clinical complexity of the case a plain film x-ray was deferred in favour of CT angiogram of the neck, which was readily available.

Investigation: It became clear from the CT scan that the depth of the foreign body was greater than anticipated and came dangerously close to the spinal column. Despite considerable artefact the scan revealed a 10cm metal foreign body entering the neck on the right side, penetrating the internal carotid artery to encroach the spinal cord at C4. As a result of the CT findings C-spine immobilisation was immediately applied. Plain films were taken and it was clearly demonstrated that the point of the foreign body lay within the spinal column.

Clinically there was no difference in outcome however this case raises important issues.

Learning Points: When deep neck trauma is suspected C-spine immobilisation should be undertaken at the earliest opportunity. Although patients with penetrating neck trauma will likely require CT scan, plain films must be considered as first line whilst awaiting transfer to the scanner. Plain films are particularly useful where metallic foreign bodies are present due to the degree of artefact and subsequent difficulty in interpretation of the images.

## **EXPLORING ENT CANCER IN HOMELESS PATIENTS RECEIVING PALLIATIVE CARE: A CASE SERIES**

*A. Hudson, JP. O'Neill, R. McQuillan  
Beaumont Hospital, Dublin 9.*

---

Objective: The homeless are a vulnerable patient group. This population face chronic exposure to environmental pathogens and adopt health behaviours which culminate in a higher risk of developing certain head and neck cancers. This study reviews the deaths of hostel dwellers receiving specialist palliative care (SPC) from a Dublin hospice.

Methods: Information was retrieved from the database at the hospice. A retrospective chart review was performed of all hostel dwelling patients from 1997 to present. Data included patient demographics, primary diagnosis and symptom burden. Incidence of ENT cancer, age at death and symptom burden were compared between the hostel dwelling and general population receiving SPC.

Results: 14 charts of homeless patients were reviewed. All patients died of cancer. The median age at death was 62. 44% (n=6) patients had an ENT malignancy. Hostel dwellers died on average 6 years earlier than the general hospice population and had a higher incidence of ENT cancer (44% vs. 1.7%). Among the hostel dwelling population those with an ENT malignancy had on average 9 symptoms during SPC; compared with an average of 5 symptoms for those with a different cancer. Conclusions: The hostel dwelling population have a shorter life expectancy and suffers disproportionately with head and neck cancers compared to the general population. A targeted ENT screening programme could be beneficial to this population. Additionally frontline hostel staff may benefit from basic education regarding early warning symptoms of ENT cancer.

## **CONSIDER IGG4 - THE NEW DISEASE WITH A BIG ENT IMPACT**

*C. J. O'Neill, M. Harney*

*Bon Secours Hospital, Cork.*

---

Background: IgG4-related disease is a relatively new entity, first described some ten years ago. It is a multi-organ disease that can present with a variety of infectious, malignant and inflammatory signs and symptoms. Objective: Demonstrate current knowledge of IgG4-related disease in Otorhinolaryngology. Methods: A review of the current literature on this new and interesting condition was conducted, with particular regard to ENT involvement. We complement the literature with our clinical experience of IgG4-related disease. We present the case of a 61-year old lady who initially presented to our centre with left parotid mass, ipsilateral sinusitis and ipsilateral nasal obstruction. She underwent partial parotidectomy, FESS, and endoscopy. FNA, repeated MRI and biopsies were also performed. She represented multiple times with persistent symptoms including subsequent ipsilateral focal deficits of ipsilateral vision and hearing loss. These were associated with inner ear inflammation, further swelling in the parotid, swelling of ipsilateral maxilla and submandibular gland. She underwent further imaging and histology. Steroids, antibiotics and anti-histamines all played a role in the medical management of her presentations. Results: Literature review demonstrates a paucity of literature regarding IgG4 and ENT. Ultimately, following many multi-disciplinary consults and imaging, biopsies, medical and surgical interventions over a nine-month period, IgG4-related disease was suspected and our patient's biopsies were retrospectively found to be strongly positive for IgG4. Conclusion: IgG4-related disease is a newly described condition with multiple ENT pathologies. We describe the many otorhinolaryngological clinical complications of this novel disease and current guidelines regarding management.

## **A SIMPLE EFFECTIVE INTERVENTION THAT SIGNIFICANTLY INCREASES THE STANDARD OF DOCUMENTATION OF FLEXIBLE NASENDOSCOPY**

*C. Hickson, W. S. Cho, J. Uddin*

*Warwickshire, United Kingdom.*

---

Objectives: To investigate the effectiveness of a simple educational intervention and documentation aid for documentation of flexible nasendoscopy (FNE). Methods Junior doctors working in otolaryngology in a large teaching hospital were provided with labelled anatomical drawings of the larynx as seen during FNE. A documentation aid in the form of a sticker was introduced for use in all FNEs performed on inpatients and A&E referrals. These stickers identified 13 'must document' anatomical sites that were agreed following discussion with departmental consultants and registrars. 22 patients identified on admission/referral, underwent FNE by junior doctors over the course of 1 month. Another 22 patients undergoing FNE by junior doctors were identified retrospectively for comparative purposes. Results: This study showed that the combined educational intervention and documentation aid resulted in a statistically significant improvement ( $p < 0.05$ ) in documentation of all 13 'must document' anatomical sites. Junior doctors performing FNE reported that the use of a pre-printed sticker not only sped up documentation considerably compared to writing by hand but also helped in identification of important anatomical landmarks which need to be examined during FNE. Conclusion: This easy to implement intervention has made significant improvement in the documentation of FNE in our department. In the face of growing litigation, it is paramount

that investigations and procedures are documented to the best of our ability. Given the limited ENT experience of most junior doctors we would urge other departments not already using a similar aid to consider doing so.

## **THYROID SURGERY IN ELDERLY POPULATION**

*S. Jaber, S. Casey, C. Timon  
RVEE Hospital, Dublin.*

---

**Background:** Advanced age with its associated co-morbidities increases the chances of postoperative complications following general surgery. Thyroid surgery in elderly population can be performed with minimum complications. **Aim:** The aim of this study is to evaluate the safety of thyroid surgery in patients aged 65 and older.

**Methods:** Retrospective analysis of patients aged 65 and older who underwent thyroid surgery under one surgeon between 2009 and 2014.

**Results:** One hundred and ninety eight patients aged 65 and older underwent thyroid surgery (156 women and 42 men), the youngest was 65-years of age while oldest 92- years of age. Although 72 patients had no morbidities, 38 had documented cardiac disease and 30 patients had raised BMI. 25 patients were known to have thyroid malignancy prior to surgery. Major indication for surgery was thyroid mass followed by compressive symptoms. There were minor in-hospital postoperative complications, three patients suffered from early postoperative hypoparathyroidism that recovered.

**Conclusions:** As life expectancy continues to increase in developed nations and the percentage of the population that is older than 65 years rises. Thyroid surgery remains a safe operation, suitable for patients 65 years or older. It is no more dangerous than surgery in youthful patients.

## **IMPACT OF LYMPHOCYTIC THYROIDITIS ON RISK OF INCIDENTAL THYROID CARCINOMA**

*E. Farrell, C. Heffernan, M. Murphy, P. Sheahan  
South Infirmery Hospital, Cork.*

---

**Objective:** Thyroid cancer has shown one of the fastest growths in incidence of any cancer. An increasing proportion of thyroid cancers are incidentally discovered. Lymphocytic thyroiditis has recently been shown to be a risk factor for thyroid cancer in general. The objective of our study was to investigate the incidence of Incidental Thyroid Carcinomas (ITC) at our institution, and to investigate impact of lymphocytic thyroiditis and other risk factors on risk of ITC.

**Methods:** Retrospective review of 713 consecutive thyroidectomies. Cases with history or preoperative diagnosis of thyroid cancer, or with non-incidentally cancer found in the index nodule constituting indication for surgery, were excluded. ITC was diagnosed as unexpected cancer occurring outside the index nodule. Lymphocytic thyroiditis was classified as absent, mild, or moderate/severe.

**Results:** 65 cases were excluded due to history/preoperative diagnosis of thyroid cancer, and 68 due to non-incidentally cancer within the index nodule. Among the remaining 580 cases, 43 (7.4%) were ITCs. ITCs were significantly associated with moderate/severe lymphocytic thyroiditis (MSLT) (relative risk 2.5, p=0.03) and complete (versus partial) embedding of the specimen (relative risk 3.3, p=0.001). Any lymphocytic thyroiditis, extent of surgery (total versus partial thyroidectomy), and TSH levels were not significant. Both MSLT and complete

embedding remained significant on multivariate analysis.

Conclusions: Our data demonstrates a significant correlation between moderate/severe lymphocytic thyroiditis and ITC. There was also an increased risk of ITC when all of the specimen was embedded for pathological examination as opposed to partial.

## **IS FINE-NEEDLE ASPIRATION CITOTOLOGY A RELIABLE DIAGNOSTIC TOOL FOR PAROTID GLAND MALIGNANCIES?**

*A.Nae, G.O'Leary, P.Sheahan*

*South Infirmary Victoria Hospital, Cork.*

Objective: Fine needle aspiration (FNA) cytology is widely use for evaluation of salivary glands masses. It has been suggested that preoperative FNA is not necessary prior to parotid surgery due to poor sensitivity and the fact that it does not influence management. The aim of the present study was to evaluate FNA accuracy in diagnosing parotid gland malignancy.

Methods: A retrospective study reviewing patient's notes, FNA and histopathological results was carried out for patients operated for parotid gland tumors in our department over a 16 year period. Cases without preoperative FNA or inadequate FNA were excluded.

Results: 288 patients undergoing parotidectomy with preoperative FNA were identified. 30 were excluded due to inadequate FNA. Among the remaining 258 patients, histology showed 54 malignant tumors and 204 benign tumors. The sensitivity and specificity of FNA for malignancy was 85.1% and 94.6%, respectively. Positive predictive value was 80.7% with a negative predictive value of 96%. FNA accuracy was found to be 92.6%.

Conclusions: Our results demonstrate good sensitivity and high specificity for FNA in detection of parotid malignancy. Our findings support preoperative FNA as standard of care for evaluation of parotid masses as it identifies most malignant tumours and thus facilitates preoperative counseling and triaging of surgical urgency, however, surgical excision remains gold standard.

## **INCIDENCE OF SECOND PRIMARY LUNG CANCER FOLLOWING TREATMENT FOR LARYNGEAL SQUAMOUS CELL CANCER**

*M. Adams, G. Gray, R. Ullah, B. Devlin*

*Belfast, Northern Ireland.*

Objective: To describe the incidence of second primary lung cancers following treatment for laryngeal squamous cell cancer in Northern Ireland over a four year period. Methods: Retrospective chart review of all patients treated for laryngeal SCC in Northern Ireland between 2007–2010. Results: A total of 215 cases were reviewed. 15/215 (5%) patients developed secondary lung cancer during follow up. Median survival following diagnosis of second primary lung cancer was 5.5 months (mean 6, range 0-16). We also discuss the published literature regarding possible screening for such cancers. Options to screen for second lung cancers include interval chest x-ray, CT scanning with or without auto fluorescence bronchoscopy & PET-CT. Screening may be applied selectively to those patients felt to be at higher risk for second primary cancers.

Conclusions: Second primary lung cancer is common in head & neck cancer patients and the risk persists more than 5 years post treatment. Survival following a diagnosis of second primary lung cancer is less than 1 year for a majority of patients. There may be potential to screen patients who are felt to be at high risk.

## **OUTCOMES OF CIDOFIVIR INJECTION IN LARYNGEAL PAPILLOMATOSIS.**

*A. Almanassra, M. Rafferty, A. Curran, N. Basheeth  
St Vincent's University Hospital, Dublin 4.*

---

**Objectives:** Recurrent respiratory papilloma can be a chronic and debilitating condition that can significantly adversely affect speech and respiration. Surgical removal or intralesional cidofovir are the main treatment options. Cidofovir is used in an off licence fashion. Recent publication in both Europe and USA have suggested that it is a safe medication to use in recalcitrant cases.

We present the results of employing new guidelines for use of Cidofovir in a heterogeneous population of chronic.

**Material and methods:**

All Patient who attend SVUH voice clinic were offered this treatment as per protocol. All patients had an initial laryngoscopy and multiple biopsies prior to a scheduled 6 weekly injection programme., data from prospectively maintained database was analysed, ( GRBAS and DERKAY) scores were used to objectively assess treatment outcomes.

**Results:** 8 patient achieved complete resolution with between 3-4 injections.

1 patient stopped procedure due to pregnancy. 1 patient received 6 injections with dramatic reduction in volume. Complete resolution was not achieved. Patient underwent cidofovir injection for laryngeal papillomatosis (M:F 5:3, mean age: 53).

## **A CHALLENGING DIAGNOSIS; A CASE REPORT OF EPIGLOTTIC MYOEPITHELIOMA**

*K. Conroy, R. Hall  
Manchester, United Kingdom.*

---

**Introduction:** Salivary gland tumours of the larynx are uncommon, and their subtype can be difficult to determine. We describe the case of a benign epiglottic myoepithelioma masquerading as a malignancy, and discuss the diagnostic challenges we faced.

**Case:** A 77 year old man presented with choking episodes, dysphonia and progressive dysphagia for several months. Flexible nasendoscopy showed a cystic-type mass arising from the epiglottis.

**Investigations:** CT and MRI confirmed the clinic findings. The patient underwent laryngoscopy and biopsy, reported as a mucinous adenocarcinoma. PET CT and upper and lower endoscopy were requested to look for potential primary lesions. After extensive multidisciplinary team discussion, and literature review, the patient underwent laser resection of the epiglottis. Subsequent analysis concluded the tumour was a myoepithelioma. The patient has made a good recovery.

**Discussion:** Salivary gland tumours account for around 1% of laryngeal tumours.

Myoepitheliomas comprise only 1.5% of all salivary gland tumours, and show a spectrum of morphology owing to the fact that they may contain spindle, epithelioid or plasmacytoid cells; therefore they are difficult to recognise, and may be underdiagnosed. We present only the second reported case of laryngeal myoepithelioma, demonstrating the importance of a thorough, multidisciplinary approach to these patients.

## **FACTORS INFLUENCING MANAGEMENT OF GRAVES' DISEASE**

*M. Cassar, T. Moran, C. Brophy, H Rowley  
Mater Hospital, Dublin 7.*

---

**Introduction:** Graves' disease, the commonest cause of thyrotoxicosis, is a female-predominant autoimmune disorder characterised by stimulatory antibodies to thyroid stimulating hormone receptors, mostly affecting patients in their fourth and fifth decades. Eu/hypothyroidism may be achieved with antithyroid medication, radioactive iodine and thyroidectomy.

**Objective:** The aim of the study was to establish factors influencing management for Graves' disease in the medical literature, to support evidence-based patient-physician discussion, management, and informed consent.

**Methods:** A comprehensive search for primary and secondary studies was carried out in MEDLINE in July and August 2015, including human studies without time-limitation. References of included studies and relevant guidelines were manually searched to augment the initial computer-based database search.

**Results:** Multiple studies, published in various specialty journals, address different aspects of the main treatment modalities. We rely mostly on observational studies with high risk of bias and confounding factors to compare the effectiveness of the main treatment modalities. Antithyroid drugs are associated with high relapse rates. Effectiveness of radioactive iodine and surgery is controversial but a recent meta-analysis suggests an advantage with surgical intervention. Thyroidectomy may also be the cost-effective option below a reasonable monetary threshold. Specific contraindications, complications and adverse effects need to be factored in during the decision-making process.

**Conclusions:** Evidence-based practice is limited by low quality, mostly retrospective observational, studies in the medical literature. Each management option has a number of advantages and disadvantages and needs to be individualised for the patient, especially for uncomplicated Graves' disease, while supporting cost-effective healthcare.

## **IS THE RISK OF POST-TONSILLECTOMY HAEMORRHAGE INCREASED IF THE PROCEDURE IS PERFORMED AT THE WEEKEND?**

*A. Patel, N. Foden, A. Rachmanidou  
Kent, United Kingdom.*

---

**Objective:** Tonsillectomy is a common, low-risk procedure. Post-tonsillectomy haemorrhage remains the most serious complication and can be life-threatening. Suggested risk factors for post-tonsillectomy haemorrhage include increasing age, males and known coagulopathy. Recent nationwide studies in the UK and US have identified an increased morbidity and mortality for both high-risk and low-risk elective surgery carried at the weekend. New UK government initiatives are resulting in increasing elective tonsillectomies being performed at the weekend. We aim to identify whether elective tonsillectomies performed at the weekend have an increased rate of post-tonsillectomy haemorrhage.

**Methods:** We retrospectively reviewed routinely collected data in a 3-year period at a District General Hospital where weekday and weekend elective tonsillectomy lists are performed. The same primary surgeons performed procedures in the two groups. All patients who developed a post-tonsillectomy haemorrhage were identified and the day of original operation was noted. Statistical significance was performed using a chi-squared test, with corrections for age, gender and tonsillectomy technique (coblation or dissection).

**Results:** Between 2010 and 2013, 2208 elective tonsillectomies were performed on a

weekday, 141 were performed on the weekend. 104 (4.71%) post-tonsillectomy haemorrhages were recorded on patients who underwent their procedure on a weekday, 10 (7.09%) on the weekend ( $p = 0.20$ ). 52 (2.21%) patients required re-intubation for haemorrhage arrest in theatres.

Conclusions: Our study suggests that there is no difference in the rate of post-tonsillectomy haemorrhage regardless of whether the procedure is performed on a weekday or weekend.

## **THE MANAGEMENT OF PROXIMAL PAEDIATRIC SIALOLITHIASIS: GLAND PRESERVING SURGERY**

*A. Patel, F. Ryba, K. George*

*Kings College Hospital, London, United Kingdom.*

---

Objective: Around 3% of sialolithiasis occurs in children. Adults with proximal submandibular sialoliths are effectively managed with sialoendoscopy, with or without intraoral stone release. The preserved submandibular glands have been shown to retain their salivary secretion rate. Most paediatric submandibular sialoliths are small and distal; they are managed with sialoendoscopy alone. Proximal (proximal duct, hilum, intraparenchymal duct) sialoliths in the paediatric population can occur. Their management is less clear, traditionally resorting to gland excision. We report the outcomes of gland-preserving surgery for paediatric proximal submandibular sialoliths.

Methods: We retrospectively reviewed all the salivary gland stone releases performed on children < 16 years-old at a tertiary referral centre between April 2013 and April 2015.

Challenging salivary stones are referred to this tertiary centre for further management. All the children were routinely followed up and had a telephone follow-up.

Results: 8 children underwent treatment for sialolithiasis under general anaesthetic. They were all referred from distant secondary care hospitals with confirmed proximal submandibular sialoliths. All the stones were successfully extracted using gland-preserving techniques; sialoendoscopy with basket retrieval +/- microdrill fragmentation, or intra-oral stone release. All the patients were symptom free at routine and telephone follow-up (range 4-20months) with excellent patient satisfaction results. One patient developed a ranula which was successfully managed under local anaesthetic in the outpatient clinic.

Conclusions: Gland-preserving techniques are safe and effective as a treatment for proximal paediatric submandibular gland stones. We have produced a treatment protocol which highlights the suggested procedure depending on the exact site of the stone.

## **HOW GOOD IS A DIAMOND BURR?**

*A. Ferguson, C. Smith, B. Hanna*

*Royal Victoria Hospital, Belfast, Northern Ireland.*

---

Objective: The drill and diamond burr are pieces of equipment used regularly in ENT practice. We present a case where these were essential in the management of an unusual emergency trauma patient.

Methods: A 39-year-old male was admitted with a self-inflicted crossbow injury to the neck and base of skull. The crossbow bolt entered the neck in the midline superior to the hyoid bone extending through base of tongue, post-nasal space and sphenoid sinus, with the vanes of the arrowhead lodging in the sphenoid bone and the tip entering the pituitary fossa. The airway was patent on presentation.

Results: The crossbow bolt was removed endoscopically by carrying out posterior

septectomy, posterior ethmoidectomy and sphenoidectomies. The diamond burr was used to drill through the carbon shaft and vanes of the arrowhead to allow removal in piecemeal without requiring change.

Conclusions: This shows the power of a diamond burr and its useful application in an unusual trauma case.

## **THE QUALITY OF RHINOPLASTY HEALTH INFORMATION ON THE INTERNET: WHAT ARE PATIENTS BEING EXPOSED TO?**

*A. T. Haymes*

*Wimbledon, London, United Kingdom.*

Objective: Patients considering rhinoplasty frequently utilise internet health resources prior to consultation with a surgeon. These websites can be beneficial and promote patient autonomy if of a high quality, or be detrimental if misleading impressions about results and complications are reported as fact. This study aimed to objectively assess the quality of information freely available on the internet to patients considering rhinoplasty.

Methods: The three most trafficked search engines in the UK (Google, Bing and Yahoo) were searched using various phrases relating to rhinoplasty. The first 30 links from each search were screened; suitable sites were evaluated using the LIDA Instrument (accessibility, usability and reliability criteria), DISCERN instrument (quality) and had their Flesch Reading Ease Score (FRES) calculated. Results of the 360 possible links, 66 were analysed. The mean LIDA accessibility score was 47/54 (87%), usability score was 7/12 (61%), and reliability score was 7/30 (22%). The average DISCERN score was 40/75 (54%) and the average FRES was 57.7 (range 39-77). There was no correlation between a websites LIDA score ( $rs = 0.033$ ,  $P = 0.79$ ) or DISCERN score ( $rs = 0.070$ ,  $P = 0.56$ ) and its search result rank. FRES values represented considerably less readable material than is recommended.

Conclusions: Rhinoplasty internet health information is generally of low quality, unreliable and less readable than recommended. Patients are at risk of being misled by inaccurate or commercially motivated information; improvements are needed to increase the quality of internet rhinoplasty resources for patients.

## **NASAL CORTICOSTEROID SPRAYS: PATIENT PERCEPTION KNOWLEDGE AND USE**

*F. Tan, K. Hinchion, K. Davies, M. Thornton, I. Keogh*

*University Hospital, Galway.*

Introduction: Information regarding patient knowledge, perception, and satisfaction of using nasal corticosteroid sprays is lacking. Instruction provided to patients is often suboptimal and consequently many do not feel they improve symptoms. An assessment of the patient's understanding and practice in using nasal sprays is necessary. Methods Prospective, questionnaire based study, assessing patient knowledge, perception, and technique of using nasal corticosteroid spray. SPSS software used to analyse data.

Results: Fifty two adult patients have returned questionnaires to date. Ages range from 18 to 62 years, 1 Male: 1.5 Female. 73% of patients did not know their medication contained steroids, and 56% of patients were not informed how to administer the sprays. 37% patients were not advised of length of treatment. 35% gave up in under two weeks, primarily because they reported minimal or no improvement in nasal symptoms.

Furthermore, 56% of patients complained of unpleasant side effects such as bad taste,

intolerable nasal dryness and epistaxis.

Conclusion: GP's and ENT specialists must ensure patients are aware of what drugs are in their nasal sprays, duration of use, potential side effects and appropriate administration technique. Patient education and technique could ideally be integrated into the role of a clinical nurse specialist.

### **SHORT-TERM AND EXTRA-NASAL EFFECTS OF GRAZAX: THE SLIGO EXPERIENCE**

*F. Tan, A. Buffour, A. White, N. Patil  
Sligo Regional Hospital, Sligo.*

Objectives: To explore the effects of Grazax on rhinoconjunctivitis in the first 2 months of treatment, and to assess its potential effects on co-existing asthma. Methods: A prospective questionnaire study was conducted on 35 patients who were diagnosed with allergic rhinitis based on RAST results. A 2-month follow-up was completed before summer 2015, and telephone interviews was carried out 4 weeks and 8 weeks after initiation of medication. The mini Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ) was used to quantify the therapeutic effect of Grazax. In addition, in those who had co-existing asthma, the mini Asthma Quality of Life Questionnaire (AQLQ) was employed to qualify the respiratory outcome. Our statistical software of choice was SPSS 22. Results There is no significant difference between the treatment and control groups in terms of patient demographics, initiation of medication since diagnosis, total and grass IgE levels, and co-morbidities. In terms of treating hay fever, Grazax did not show substantial improvement in patient's quality of life after 4 weeks of treatment. However, a noticeable satisfaction was reported by patients who managed to continuously use it for 8 weeks. With regard to a potential bystander effect of the medication on asthma, significantly more patients reported symptomatic improvement when using Grazax than controls.

Conclusion: Grazax could be started closer to start of grass pollen season than previously suggested. While more evidence is required to support the one airway theory, Grazax may have the potential to provide benefits to allergic rhinitis patients with co-existing asthma.

### **THE LEYDEN SURFER: A COST EFFECTIVE DEVICE FOR REVIEWING IMAGING DURING ENDONASAL SINUS SURGERY**

*A. Gomati, CG. Leonard, PJ. Leyden  
Belfast, Northern Ireland.*

Objective: The availability of CT imaging for endonasal sinus surgery is of the utmost importance for patient safety. The pre-operative analysis of the scans, and construction of a building block plan of the patient's anatomy is widely advocated. We wished to find an easy, cost effective way of reviewing imaging intraoperatively without the need to direct a junior colleague or member of nursing staff slide by slide.

Methods: We discussed the issue with our colleagues in Information Technology to take a multidisciplinary approach to the problem.

Results: A once only expenditure of £40 to purchase the 'Leyden surfer'. The surfer is a four pedal USB foot switch that allows the surgeon to review planes and slices on CT scan at the touch of foot. This is in contrast to sterile iPad covers. (£80 for 24 units). The cost of sterile computer covers can be twice this for as few as five units.

Conclusions: Trusts can purchase a 'Leyden surfer' at their local Maplin or similar electronic

store. The USB device should auto install, and with surgical level tinkering images can be reviewed at the tap of a foot. This provides cost effective real time radiological answers to intra-operative clinical questions.

## **ANALYSIS OF THE BIOCHEMICAL CHANGES FOLLOWING TOTAL THYROIDECTOMY IN PATIENTS WITH A HISTORY OF GRAVES DISEASE; A RETROSPECTIVE ANALYSIS AT A TERTIARY REFERRAL CENTRE**

*C. Collery, M. Murphy, P. Sheahan*

*South Infirmary Hospital, Cork.*

---

Hypocalcemia is common after total thyroidectomy for Grave's disease. We have previously shown a correlation between hypomagnesemia and hypocalcaemia after thyroid surgery. The objective of this study was to evaluate changes in magnesium and calcium during the first two postoperative days among patients undergoing total thyroidectomy for Grave's disease. Methods: Retrospective review of 65 patients undergoing total thyroidectomy for Grave's disease. Analysis of biochemistry taken at 24 hours post-operative day one (POD1) and on post – operative day two (POD2) was performed. Hypocalcemia was defined as corrected calcium <2.0mmol/l.

Results: A total of 24 patients developed biochemical hypocalcemia. Among the entire group, magnesium levels showed a drop on POD1 ( $p=0.001$ ) and POD2 ( $p<0.0001$ ) compared to preoperative levels. In hypocalcemic patients the drop in magnesium levels was significant on POD1 ( $p=0.001$ ) and POD2 ( $p=0.0002$ ), whereas among patients remaining normocalcemic the change in magnesium levels was not significant on POD1 ( $p=0.17$ ), but was significant on POD2 ( $p=0.005$ ). There was no difference in preoperative magnesium levels when comparing the hypocalcemic and normocalcemic groups. However there were significant differences between these groups in both absolute magnesium levels, and in the change of magnesium levels compared to pre – operative levels, on both POD1 ( $p=0.001$ , and  $p=0.001$ , respectively) and POD2 ( $p=0.0001$ , and  $p=0.0007$ , respectively).

## **Trade Exhibition**

Amplifon  
A Menarini Pharmaceuticals Ireland  
Arthrocare UK  
Audico  
Advanced Bionics UK Ltd  
Beacon Audiology  
Cochlear Europe Ltd  
Corr Healthcare  
CryoLife  
ENT News  
Eurosurgical  
Guy Mark  
Idoneus Medical Services Limited  
Irish Hospital Supplies Ltd.  
Johnson & Johnson  
Meda Health Sales  
Medserv  
Medtronic Ltd.  
Merz Pharma UK Limited  
Murray Surgical Ltd  
Neil Med European Division  
Olympus Ireland  
Omega Financial Management  
Sisk Health Care T/A Techno Surgical  
Smith Nephew  
Stallergenes  
Sword Medical

## Acknowledgements

Exhibitors :

The Society is grateful to all of our stand sponsors, whose support is invaluable for the continued success of our meetings.

Publicity :

**Medical Independent** ([www.medicalindependent.ie](http://www.medicalindependent.ie))

Audiovisuals :

**AVA Systems Limited** ([www.ava.ie](http://www.ava.ie))

Printing + Artwork :

**Coreprint, The Mall, Sligo** ([www.coreprint.ie](http://www.coreprint.ie))

Reception Desk Support :

**Idoneus Limited** ([www.idoneusmedical.ie](http://www.idoneusmedical.ie))

Dear Delegates,

Please send us your comments via our website ([www.iosconference.org](http://www.iosconference.org)). All submissions will receive our prompt attention.

Thanking you,

Nash Patil  
(for) the IOS Organising Committee