Abstracts for BACO Oral Presentations

Sunday 10th January

Please note that presenting authors stated on the below abstracts may not correspond to the e-posters.
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**Patient perceptions on the use of cocaine in sinonasal surgery**

**BACO2020 Abstracts (Oral & Posters) - Rhinology**

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**Background:** Medical cocaine has routinely been used in sinonasal surgery for decades. In an era where care has become more patient-centred, and the population is more health-conscious, this is the first study that evaluates patient perception on the use of medical cocaine.

**Objectives:** 1) to determine patient perception on the use of cocaine in sinonasal surgery. 2) to establish occupational drug testing ramifications

**Methods:** We prospectively surveyed 63 patients attending a rhinology clinic in University Hospital Lewisham, London. Ethical approval obtained.

**Results:** The majority of our patients, 35 (56%), felt they were not aware cocaine was used in nasal surgery. No patient felt they had been sufficiently informed about its side effects. Four patients (6%) stated that their employer performed drug testing including cocaine, while 14 (23%) were unsure. Three patients (5%) were appropriately informed that an occupational drug test can be positive, whilst 49 (83%) patients stated they were not informed.

**Conclusions:** The majority of patients were unaware of the routine use of medical cocaine, nor did they know the side-effects. Given its implications and the lack of awareness, our study indicates we should improve our discussion with patients about the use and implications of medicinal cocaine, considering it can be detected in sweat and hair weeks to months later. We have created a written information leaflet provided pre-operatively to assist in this discussion.
Use of Acellular Porcine Small Intestinal Submucosal Grafts in Endoscopic Middle Ear Surgery

BACO2020 Abstracts (Oral & Posters) - Otology, Neuro-Otology and Audio-Vestibular Medicine

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Background: Endoscopic middle ear reconstruction (EMER) performed in well-selected patients offers a minimally invasive approach with lower pain levels and greater patient satisfaction. However, using harvested autologous grafts for EMER still requires an incision. Acellular porcine small intestinal submucosal grafts (PSISG) have been long used in other anatomical sites, and their use can offer a truly minimally-invasive EMER.

Objectives: This study aims to describe our experience in using PSISG in EMER. It also aims to analyse our graft take rate and possible complications.

Materials and Methods: We retrospectively reviewed the medical records of all patients who had EMER using PSISG (Biodesign®, Cook Medical, Bloomington, IN, USA), between May 2016 and January 2019. The decision to use EMER using PSISG was influenced by external auditory canal diameter and the extent of the perforation/middle ear disease, in addition to patients' preference. Data collection included patients' demographics, operative details and post-operative outcomes. Data from the first post-operative follow-up at 2-4 weeks and subsequent follow-ups up to one year was collected.

Results: The study included fifty-five patients with a mean age of 39.4 years. Indications for performing EMER with PSISG included dry TM perforations and cases with small cholesteatoma. Total of 48/55 patients (87.3%) had intact graft at one-year follow-up. Four patients (7.3%) had persistent or recurrent perforation, mostly due to post-operative infection.

Conclusions: In appropriately selected patients, EMER using PSISG is safe and effective. It allows for a scarless and bandage-free operation, with short inpatient stay and comparable success rate to conventional techniques.
Does endoscopic ear surgery affect the outcomes of ossiculoplasty?

BACO2020 Abstracts (Oral & Posters) - Otology, Neuro-Otology and Audio-Vestibular Medicine

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Background: The relatively new technique of trans-canal endoscopic ear surgery (TEES) when compared to microsurgery for ossiculoplasty, has advantages of better visualisation and no external incision but also has the disadvantage of being a one-handed procedure.

Objectives: The aim of our study was to compare hearing outcomes after ossiculoplasty performed using microsurgery versus TEES.

Methods: Data from prospective audit of 157 consecutive patients who underwent ossiculoplasty by a single otologist from 2009-2018 was analysed. TEES was introduced in the department in 2014 therefore all patients before this underwent microsurgery. Patients were classified into two groups, TEES or microsurgery. Hearing outcomes were recorded at 3 and 12 months post-operatively and compared to pre-operative levels. Other variables included were condition of stapes and reconstruction material used.

Results: Of the 157 cases, 50 were TEES and 107 were microsurgery (81 microscope only and 27 combined with endoscope). There was statistically significant improvement (p&lt;0.001) in AC (43.4dB pre-operative, 36.2dB post-operative), BC (20.3dB preoperative, 17.6dB post-operative) and ABG (21.8dB pre-operative, 16.7dB post-operative) in the cohort as a whole.

Both groups achieved an ABG better than 20dB; 72% in TEES, 73% in the microscopic group and there was no significant difference. There was no change in hearing at 12 months when compared to 3 months. No statistically significant difference was noted based on stapes condition, type of material used for ossiculoplasty or tympanic membrane graft.

Conclusions: TEES is safe and as effective as microsurgery in ossiculoplasty with much less pain and morbidity.
Can speech and language therapists evaluate hoarse voice patients on the 2 weeks wait head and neck cancer referral pathway?

BACO2020 Abstracts (Oral & Posters) - Laryngology/ Speech and Language Therapy

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Background: There has been much debate about the efficiency of the 2-week-wait referral system; in particular, the immense burden it places on the NHS for a relatively low diagnostic yield. Many strategies have been used to alleviate some of this burden, including using computer algorithms for risk stratification, telemedicine, and nurse-led clinics. In our department hoarse voice is the most common reason for referral on the 2-week-wait pathway (58%). Speech and Language Therapists (SLTs) are skilled in assessment and management of voice disorders including laryngoscopy. We therefore sought to create a SLT led service to assess these patients.

Objectives: To assess the feasibility of a SLT-led 2-week-wait hoarse voice clinic and the requisite conditions for patient safety. We hope to provide a blueprint that other NHS Trusts can employ.

Methods: Trust approval was obtained. Competencies were identified and developed. A clinic protocol was devised. Clinics were run in parallel with a consultant head and neck surgeon, and results audited over a 6-month period.

Results: A total of 57 patients were seen, of which 44% were reassured and discharged. The most common diagnosis was muscle tension dysphonia (40%). Two malignancies were identified and treated without delay. There were no instances of missed diagnosis during the audit period. Patient compliance and feedback was positive.

Conclusions: Referrals can be effectively triaged and low risk patients seen competently by a SLT. Pressure on the service is reduced and patients benefit from seeing a voice specialist who can provide a thorough assessment and on the spot advice.
Dissecting the roles of stromal fibroblasts and macrophages in head and neck paragangliomas

Background: Head and neck paragangliomas (HNPGN) remain a challenge due to their difficult anatomical location and proximity to major blood vessels and cranial nerves in the neck. Strategies to target tumor microenvironment to shrink HNPGN before surgery or radiotherapy could vastly improve the outcomes of management. Stromal cells such as fibroblasts and macrophages are known to have a significant impact on the growth of cancers but their role in HNPGN pathogenesis remains unknown.

Objectives: Assess phenotypic and functional characteristics of stromal fibroblasts and macrophages in the tumour microenvironment of HNPGN.

Methods: Patients undergoing surgery for HNPGN were recruited into the study. HNPGN tissue was used to establish tumour fibroblast cultures while ear canal skin or mucosa from mastoid were used to establish normal fibroblast cultures. RTPCR and flowcytometric analysis were carried out to establish the phenotype and functional profile of the fibroblasts from HNPGN and normal tissue. Immunofluorescence staining for fibroblast and macrophage markers was performed on frozen HNPGN tissue.

Results: Fibroblast cultures were successfully established from tumour tissue from nine HNPGN patients. A strong expression of fibroblast markers CD90 and podoplanin was present in HNPGN fibroblasts on flowcytometry. Fibroblasts from HNPGN expressed higher levels of fibroblast activation protein, monocarboxylate transporter 1 and insulin receptor compared to normal fibroblasts. CD163, a macrophage marker, was strongly expressed in HNPGN in situ.

Conclusions: Fibroblasts and macrophages form an important component of HNPGN stroma. Ongoing functional analyses of the cell subtypes will uncover their role in the growth of HNPGN.
Direct discharge from postoperative anaesthesia unit following grommet insertion in a paediatric population

BACO2020 Abstracts (Oral & Posters) - Paediatrics

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Background: Grommet insertion is generally performed as a day case procedure. However, patients are often admitted for several hours due to post-anaesthetic observation. Modern anaesthetic techniques allow faster recovery and minimise side effects thus there is a potential to expedite discharge. We have a longstanding pathway of discharging dental and MRI patients’ home from postoperative anaesthetic care unit (PACU).

Objectives: This project sought to extend the direct PACU pathway to patients undergoing grommets to reduce hospital stay, improve patients’ experience and enhance capacity.

Methods: Data was collected prospectively from consecutive patients undergoing grommet insertion in a tertiary referral paediatric hospital between January and August 2019. Patients were identified as suitable for direct discharge from PACU by the listing surgeon; confirmed on the day of surgery by the anaesthetist. The nursing staff used a robust standardised checklist to determine suitability for direct discharge home. Parents were followed up with a telephone questionnaire.

Results: Twenty children who underwent grommet insertion as a sole procedure and graded as American Society of Anaesthesiologists (ASA) score 1 were included. All children were successfully discharged home directly from PACU with no unplanned re-admissions. All telephone feedbacks were positive. The financial modelling found that direct grommet discharge would increase revenue by £110,656 over a one-year period. The addition of direct admission to theatre, bypassing TAU, would further increase revenue to £553,280.

Conclusions: Direct PACU discharge following grommet insertion in a paediatric population is feasible and can be performed safely and can result in a significant increase in revenue.
The largest single site case series of endoscopic video-assisted transoral (EVAT) resections of the oropharynx - Clinical, oncological and functional outcomes

BACO2020 Abstracts (Oral & Posters) - Head and Neck

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Background: Transoral surgery for suspected or proven oropharyngeal malignancies has advanced significantly with the use of transoral laser microsurgery (TLM) and transoral robotic surgery (TORS). However, an accepted alternative is the use of endoscopic video-assisted transoral surgery (EVAT) of which there are only two smaller series reported.

Objectives: Case series review of the outcomes of 56 consecutive patients who underwent EVAT surgery as part of their cancer work up or treatment. We will draw comparisons to TLM and TORS patients in order to assess the use of this alternative technique.

Methods: All patients undergoing EVAT surgery were retrospectively reviewed from 2015 onwards. Clinical notes, discharge summaries and post-treatment dysphagia questionnaires were used to establish patient demographics, inpatient length of stay, complications, TNM staging, histological margins, adjuvant treatment, disease survival and swallowing outcomes.

Results: The average age at treatment was 59.3 years with all patients having oropharyngeal disease or carcinoma of unknown primary staged between T0-T2 and N0-N3. Tongue base mucosectomy or resection was performed in 26 cases and lateral oropharyngectomy for tonsil disease was done in 30. Squamous cell carcinoma accounted for 96% of all histology. The average hospital stay was 3.8 days and clear margins were obtained in all patients. We report two secondary post-op haemorrhages. 5 patients (8.9%) had recurrent disease, only one of which was at the primary oropharynx site.

Conclusions: EVAT surgery is a valid alternative to TLM and TORS for oropharyngeal cancer surgery, as it is possible to obtain clear margins, equal oncological and functional outcomes.
**Outcomes following surgical management of superior semi-circular canal dehiscence syndrome by transmastoid canal occlusion in 55 operated ears**

**Background:** Superior canal dehiscence syndrome (SCDS) remains an uncommon diagnosis, presenting with a variety of audiovestibular symptoms. Surgery is reserved for disabling symptoms.

**Objectives:** Evaluate the changes in clinical, audiovestibular, and patient-reported outcomes following transmastoid superior canal occlusion for SCDS.

**Methods:** We collated audiological (pure tone audiogram), vestibular (cervical vestibular evoked myogenic potentials (cVEMPs)) and patient-reported outcome measures (Dizziness Handicap Inventory (DHI) and subjective symptom grading). All transmastoid occlusions for SCDS, performed by a single-surgeon at a tertiary centre, January 2008; July 2019, were included. Revision cases, and primary middle cranial fossa approaches, were excluded.

**Results:** 52 patients (55 ears) met the inclusion criteria. 31 (56%) were female. Mean age was 47 years (range 29-63 years) and median follow-up 12.5 months. Six patients had bilateral SCDS, with four undergoing sequential bilateral surgery. Two ears were revised by a middle cranial fossa approach. Autophony was the predominant presenting symptom and the most responsive to surgery, improving in 89.5%. Significant improvements occurred in dizziness (loud sounds or pressure-related), aural fullness, and pulsatile tinnitus, whilst balance improvements were not statistically significant. DHI data were available for 70%, improving significantly overall and across individual subgroups. A mean 500-1000Hz air-bone gap improvement of 6.9dB HL occurred. Closure of a pre-operative air-bone gap occurred in 72%. There were no dead ears. cVEMP thresholds, when recordable, normalised in all, except two that underwent revision.

**Conclusions:** Transmastoid occlusion surgery is effective at improving patient-reported outcomes and normalising cVEMP thresholds, though some symptoms, notably disequilibrium still persist, to varying degrees.
Improving the detection and management of balance problems in cancer survivors treated with cisplatin: A cross-sectional study

BACO2020 Abstracts (Oral & Posters) - Otology, Neuro-Otology and Audio-Vestibular Medicine

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**Background:** Balance problems caused by cisplatin chemotherapy are associated with significant morbidity. The problem is likely to be under-reported and underestimated in the current literature.

**Objectives:** To assess the prevalence and associated factors of balance problems in adult cancer survivors who had completed cisplatin treatment, and to identify new clinical methods to improve detection of affected patients.

**Methods:** Participants were adult survivors of testicular or gynaecologic cancer who had completed cisplatin treatment. A thorough history, clinical and laboratory investigations were undertaken.

**Results:** Sixty-five participants were recruited. Eleven (17%) reported some balance symptoms. Participants with balance symptoms were 6.7 (95% CI 1.55-28.68) times more likely to report hearing loss and 7.1 (95% CI 1.45-35.23) times to have peripheral neuropathy, compared to asymptomatic participants. Symptomatic participants had statistically significantly worse pure tone hearing threshold than asymptomatic participants. There was no difference in demographic data between symptomatic and asymptomatic participants including age, gender, cancer site, cisplatin cumulative dose, and time after chemotherapy treatment. From our data, a novel clinical guideline including bedside tests and/or questionnaires to identify patients most at risk of audiovestibular problems will be proposed so that targeted intervention can follow.

**Conclusions:** Balance problems in cancer survivors treated with cisplatin are not uncommon. Cancer survivors who have balance symptoms are more likely to have other chemotherapy-related side effects. Vestibulotoxicity is possibly associated with cochleotoxicity and neurotoxicity. Clinicians should be aware of the potential for balance problems following cisplatin treatment and put appropriate diagnostic and rehabilitation pathways in place.
The usefulness of preoperative screening history in identifying bleeding risk in children undergoing adenoidectomy and tonsillectomy

BACO2020 Abstracts (Oral & Posters) - Paediatrics

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Background: Postoperative bleeding is the commonest complication of tonsillectomy. Identifying patients at high risk of postoperative bleeding before surgery by diagnosing previously unknown haematological disorders can reduce morbidity.

Objectives: Screening children for bleeding disorders using a standardized questionnaire allows targeting haematological investigations and prevents unnecessary tests and delays prior to surgery. The most commonly used questionnaire at present is the Paediatric Bleeding Questionnaire (PBQ) scoring system, which is designed to be filled by ENT surgeons prior to surgery.

Methods: In this retrospective observational study, we investigated the compliance ratio of our ENT department in use of PBQ for 100 patients listed for adenoidectomy and/or tonsillectomy.

Results: The results showed a poor adherence of the department in using PBQ due to lack of time and resources. We subsequently completed the PBQ questionnaire over the phone and identified 4 patients at high risk of operative bleeding. Three out of 4 of these children were diagnosed with a clotting disorder following further coagulation investigations by the paediatric haemotology service. Further measures were undertaken in these 3 children in order to prevent postoperative bleeding. Therefore, we identified 3 patients who have been otherwise been missed.

Conclusions: In order to improve our service, we have now introduced a new standardized pathway to screen all children listed for adenoidectomy and/or tonsillectomy. This involves input from a paediatric nurse specialist and a new bleeding scoring Performa filled by patients. All identified high-risk patients are further investigated by paediatric haemotology service where personalized operative care is generated to reduce morbidity.
What is the effect of patient specific virtual reality rehearsal on cortical mastoidectomy performance?

BACO2020 Abstracts (Oral & Posters) - Education & Training

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Background: Surgical rehearsal; patient specific preoperative surgical practice; can be provided by virtual reality (VR) simulation and offers a novel way of increasing the operative volume of surgical trainees.

Objectives: To investigate the effect of surgical rehearsal on cortical mastoidectomy performance and duration in a novice cohort.

Methods: University students (n=40) were recruited and randomised evenly into a rehearsal and control group. On day one, participants watched a video tutorial on cortical mastoidectomy, before completing the procedure on the University of Melbourne VR Temporal Bone Simulator as a ‘pre-test’ procedure. Participants completed 8 further cortical mastoidectomies on the VR simulator as training before drilling two 3D printed temporal bones. The rehearsal group received 3D printed bones they had previously operated on in VR, whilst the control group received two new bones. Cortical mastoidectomy was assessed using the Melbourne Mastoidectomy Scale by three blinded graders.

Results: There was high interrater reliability between the three graders (Intraclass Correlation Coefficient, r=0.9096, p&lt;0.0001). There was no difference in the mean surgical performance on the two 3D printed bones between the control and rehearsal group (p=0.2993). There was no significant difference in the mean procedure duration between the control and rehearsal group for both 3D printed bones (p=0.8709). However, there was a significant decrease in procedure duration between the first and second 3D printed bones (p&lt;0.0001).

Conclusions: Preoperative VR patient-specific rehearsal provided no additional advantage to cortical mastoidectomy performance compared to generic practice on a VR simulator.
Sociodemographics and survival characteristics of oropharyngeal cancer related to Human Papillomavirus status

BACO2020 Abstracts (Oral & Posters) - Head and Neck

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Background: Global trends reveal rising incidence in human papilloma virus (HPV) oropharyngeal cancer (OPC). Trends reveal that these patients are younger, more affluent, have lower smoking rates and survive longer than their HPV negative counterparts. Glasgow has the highest rates of head and neck cancer in Scotland as well as high rates of deprivation and working age mortality.

Objectives: This audit aims to examine whether the global patterns of HPV-related OPC are demonstrated in Glasgow.

Methods: All patients in Glasgow presenting with new OPC between January 2012 and December 2014 were identified. Data was recorded anonymously examining sociodemographics, HPV positive OPC, SIMD, TNM staging, disease specific and overall survival.

Results: There were 311 newly diagnosed OPC patients with 226 (72.7%) being male. Of the 128 (41.1%) HPV positive patients, 87 (68.0%) had smoking history. Majority (71.1%) of the HPV positive patients were in the top 3 most deprived SIMD quantile. TNM8 staging showed significant prognostic impact on overall survival (P<0.001). The overall survival time between both groups were significant (P<0.001) with a five-year survival rate of 63.9% and 29.2% for HPV positive and HPV negative patients respectively.

Conclusions: Global patterns of HPV-related OPC demonstrated globally are reflected in Glasgow. However, despite worldwide trends reporting high rates of non-smoking in HPV positive OPC patients, patients in Glasgow show high endemic rates of smoking history. This leads to an intermediate group of HPV positive smokers which may have contributed to an inferior 5-year survival rate.
The impact of external carotid artery ligation on oropharyngeal bleeding following transoral laser surgery for oropharyngeal squamous cell cancer

BACO2020 Abstracts (Oral & Posters) - Head and Neck

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Background: Oropharyngeal bleeding following transoral laser microsurgery (TLM) for oropharyngeal squamous cell cancer (OPSCC) is a serious, potentially fatal complication. We investigated whether external carotid artery (ECA) ligation reduces the incidence of postoperative bleeding following TLM for OPSCC.

Methods: A retrospective case review was undertaken of consecutive patients undergoing TLM between 2006 to 2017 at our tertiary centre. ECA ligation was performed at the surgeon's discretion. Oropharyngeal bleeding was classified using the Mayo Clinic Classification System for Postoperative Haemorrhage. Fisher's exact test was used to compare the bleeding rates between the groups with and without vessel ligation.

Results: 261 patients were included in the study. ECA ligation was performed in 75 (28.7%) of cases. Twenty-three (8.8%) patients suffered post-operative oropharyngeal bleeding: 5.3% occurred in cases with and 10.2% in cases without vessel ligation (no statistically significant differences).

Major/severe bleeding occurred in five patients: none of these had undergone vessel ligation (two cases were fatal and occurred within the first four years of this study). To account for the learning curve of performing TLM, haemorrhage rates between cases performed in the first 5 years were compared with the rest of the cohort and no significant difference was found ($\chi^2$, $p=0.191$).

Conclusions: Our cohort demonstrated a trend towards reduced oropharyngeal bleeding when ECA ligation had been performed. Major/severe haemorrhage only occurred in cases without vessel ligation, suggesting vessel ligation may protect against significant arterial bleed, without altering diffuse venous ooze.
Balloon dilation Eustachian tuboplasty reduces ETDQ-7 scores in patients with Eustachian tube dysfunction

Background: Eustachian tube dysfunction (ETD) is a common condition causing multiple otological symptoms and can be scored using the ETDQ-7 questionnaire. Balloon dilation Eustachian tuboplasty (BDET) is an emerging technique in treatment of ETD.

Objectives: Evaluate efficacy of BDET in improving symptoms of ETD.

Methods: Patients undergoing BDET over a 20-month period were included. Patients were listed for surgery on the basis of ETDQ-7 score persistently greater than 24 after 3 months use of fluticasone nasal spray and Otovent balloon. Under general anaesthesia, the Entellus XprESS was introduced into the Eustachian tube and inflated to 12 atmospheres for 2.5 minutes. Notes were reviewed retrospectively. Preoperative/postoperative ETDQ-7 scores were compared using Wilcoxon signed-rank test. Differences in outcomes according to preoperative audiometric tests were evaluated using Chi-squared test.

Results: Data was available for 67 patients; 38 had bilateral procedure. Median age was 45 years (IQR 36-58) and 62.1% of patients were female. Mean time to follow-up was 14 weeks. Following BDET, ETDQ-7 score was reduced in 76.1% of patients and reduced by ≥7 in 56.7%. Mean ETDQ-7 score was significantly reduced from 34.1 (7.2) to 25.2 (10.6); p<0.001. Considering each Eustachian tube separately (n=105), ETDQ-7 score was improved following BDET in 95.0% cases with preoperative type C tympanogram, 77.8% with type B, and 67.6% with type A; p=0.046.

Conclusions: BDET is effective in reducing symptoms of ETD. Patients with abnormal preoperative tympanometry may have higher rates of improvement.
UK national audit of head and neck cancer post-treatment surveillance

BACO2020 Abstracts (Oral & Posters) - Head and Neck

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Background: Follow-up of patients after treatment for head and neck cancer is crucial in the management of morbidity and detection of recurrence.

Objectives: To assess existing practice regarding head and neck cancer post-treatment surveillance across the UK.

Methods: Multi-centre audit involving 89 hospitals across the UK, delivered for BAHNO by Integrate (UK ENT Trainee Research Network).

Results: Complete data were collected from n=5,123 patients. 57% of recurrences occurred at 2 years, 32% between 2-5 years, and 11% post-5 years. Expedited follow-up correlated significantly with the presence of recurrence (p<0.05). The pick-up rate (for residual/recurrent disease) was 35% for expedited appointments compared to 5.2% for planned follow-ups (p<0.001). Of the expedited appointments, 63% were initiated by patients (vs. 37% by clinicians). The commonest new symptom was dysphagia (33%) but the strongest predictor of recurrence was dyspnoea (PPV=16.2%) followed by pain (neck=10.4%, mouth/throat=9.2%). There was lack of consensus around the choice of imaging modalities for investigating suspected recurrence. 30% of patients were seen in a dedicated MDT clinic with input from other health professionals available on the day in 23% of consultations. There was evidence to support the delivery of patient education regarding recurrence, smoking and alcohol advice in only 20.4%, 6.2%, and 5.3% of cases, respectively.

Conclusions: These findings provide incentive to change current practice of clinician-led follow-up, making it more patient-driven and innovative, and involving risk-stratification and greater patient education.
The effects of recreational noise exposure on the auditory system of young adults in medical school in Nairobi, Kenya

BACO2020 Abstracts (Oral & Posters) - Otology, Neuro-Otology and Audio-Vestibular Medicine

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Background: Exposure to hazardous noise levels can lead to hearing-related problems. Recreational noise is on the rise and young adults are exposing themselves to dangerous sound levels from recreational activities. Kenya has no data on recreational noise sources nor their auditory effects.

Objectives: To examine the effect of recreational noise exposure on the auditory system of young adults in The University of Nairobi medical school.

Methods: This was a cross-sectional study performed in the Kenyatta National Hospital ENT department. Subjects in medical school aged 18-35 years were recruited via convenient sampling after which they completed a recreational hearing habits questionnaire. Hearing was evaluated using PTA and DPOAE. Data analysis was conducted using SPSS version 18.

Results: The subjects recruited were 163 with a mean age of 24.6 years and a M:F ratio of 1.04:1. The highest weekly noise exposure in equivalent SPLs was found for going to night clubs (82.9 dBA). The median weekly equivalent noise exposure for all activities was 67.7 dBA. 15.3% of subjects exceeded the Environmental Protection Agency limit of 75 dBA. After noise exposure, 58.6% experienced self-reported ear complaints. The crude prevalence rate of hearing loss was 6.1%. There was no statistical difference in hearing loss between groups with intermediate and high noise exposure.

Conclusions: The median weekly noise exposure levels produced self-reported hearing complaints and suggestions of sub-clinical hearing loss. However, there was no statistically significant clinical hearing loss experienced between the cohorts.