

Results: A total of 993 volunteers (53.9% women) underwent otolaryngologic examination, with a mean age of 41.8 ± 0.89 years. The most prevalent symptoms were rhinitis (44.9%), snoring (42.8%), mouth breathing (39.3%), and nasal obstruction (33.3%). On physical examination, the most common findings were web palate (62.9%), septum deviation (56.9%), and inferior turbinate hypertrophy (37.7%). Significant correlations between symptoms and physical examination variables were nasal obstruction with septum deviation, inferior turbinate hypertrophy, high-arched palate, and class II dental occlusion; symptoms of rhinitis with inferior turbinate hypertrophy; and snoring with deviated septum obstruction, Mallampati III and IV, increased neck circumference, and age ≥ 50 years.

Conclusion: The prevalence of otolaryngologic symptoms and changes in physical examination of the upper airway are high in the adult population of São Paulo, Brazil. There is a significant association between snoring and nasal obstruction with objective signs of physical examination of upper airway and inspection of the facial skeleton.

Rhinology/Allergy

Use of the KTP DermaStat for Recurrent Anterior Epistaxis

Steven James Frampton, MBBS, MA, MRCS (presenter); Abhiney Jain; Ravi Sachinanda; Stuart Rhys-Williams; Parmod K. Jain, MS, DLO

Objective: Assess the efficacy of the potassium-titanyl phosphate (KTP) laser DermaStat handpiece in treating prominent anterior septal vessels that cause recurrent epistaxes. The handpiece is reusable, unlike the traditional disposable light fiber, facilitating more cost-effective use of KTP technology, with potential for more widespread use in the office setting.

Method: A UK-based, single-center retrospective and prospective case series. From 2004 onward 37 patients with recurrent epistaxes and prominent anterior septal vessels with/without previous cauterization (age 4-80 years; M:F 21:16) underwent a single laser treatment. The primary outcome measure was continued cessation of epistaxis after two months.

Results: A total of 89% of patients attended follow-up at 2 months, and 88% of these had experienced complete cessation of bleeding. The remaining 12% subjectively experienced a reduction in the frequency of epistaxes. No undesirable side-effects of the treatment were experienced or evident at follow-up.

Conclusion: The "Jain technique" using the DermaStat handpiece with the KTP laser is an effective method of controlling recurrent anterior epistaxes. The technique is safe, with no observed complications, and the re-usability of the hand piece facilitates more widespread and cost-effective use of KTP technology.

Rhinology/Allergy

Validation of Sniffin' Sticks Olfactory Test and Olfactory Disorder Questionnaire in a UK Population

Codruta Neumann (presenter); Carl M. Philpott, MBChB, FRCS, DLO; Allan Clark, MD

Objective: Validate the applicability of Sniffin' Sticks in a UK population. These pen-like odor dispensing devices are used to assess threshold, discrimination, and identification. Odor identification is strongly dependent on familiarity with the odors and has an important cultural component, which has limited the usefulness of other validated tests.

Method: A prospective study of 63 subjects, 24 healthy volunteers with a reported normal sense of smell, and 39 patients with an impaired sense of smell presenting either at a rhinology or an olfactory disorder clinic. Each subject's olfactory function was assessed using the Sniffin' Stick test.

Results: The mean age of the subjects tested was 46.7 years; 40 female and 23 male. In the patient group, 30 were hyposmic and 9 anosmic. In the healthy volunteers group, all subjects were normosmic. The mean TDI score for patients and healthy volunteers was 21.06 (range, 8-30.5) and 33.73 (range, 29.25-37.75) respectively. Mean identification score in the 2 groups was 8.84 (range, 1-15) for patients (range) and 13.69 (range, 11-16) for healthy volunteers.

Conclusion: In our sample of the UK population the TDI and odor identification scores for healthy volunteers and patients with olfactory disorders are comparable with the normative data published on large samples of European populations. Discussion of commonly mistaken odors in the odor identification test is undertaken.

Sleep Medicine

Acoustic Features of Voice in Patients with Snoring

Luca Guastini, MD (presenter); Barbara Crippa; Francesco Mora, MD; Francesco-Antonio Salzano, MD; Renzo Mora, MD; Valentina Santomauro, MD

Objective: Determine whether the acoustic characteristics of snoring sounds differed between 30 simple male adult snorers (group A) and 30 healthy adult male subject (group B) by using a multidimensional voice program (MDVP), which is a commonly used computer program that analyzes various aspects of voice.

Method: Group A patients presented a Friedman tongue position grade I, tonsil size 2 to 3, a body mass index of 15. Phonetically balanced sentences and sustained vowels a, e, and i were digitally recorded with the MDVP; evaluation of voice handicap index (VHI) was done too.

Results: Compared with control group, in group A: the acoustic parameters presented a statistically significantly higher value ($P < .05$) of fundamental frequency (158.2 Hz vs 120.2 Hz), jitter (2.03 % vs 0.66 %), shimmer (6.54 % vs 3.77 %), NHR (0.24 vs 0.11), SPI (13.7 vs 8.71), DVB (2.23 % vs 0.12 %), DUV (9.31 % vs 0.54 %) and vAm (22.09 % vs 11.13 %), according to the degree of hearing loss; VHI had a mean value of 66 (vs 37 of group B).

Conclusion: The study indicates that snoring affects voice production by changing its acoustic parameters. A voice analysis program MDVP can be used for snoring sound analysis as a noninvasive procedure for examination of sleep-related breathing disorders.

Sleep Medicine

Coblation Channeling for the Tongue

Qingfeng Zhang, MD (presenter); Wenfei Qin;
Delong Liu, MD

Objective: Investigate the efficacy of coblation-channeling for the tongue (CCT) in treatment of tongue hypertrophy in OSAHS.

Method: CCT was performed on 30 patients with OSAHS with tongue Friedman III or IV. Tongues were channeled perpendicularly to tongue base with laterally to tongue body from 10mm before FC and 25 mm from apex using Coblator II Wand Reflex55.

Results: MRI was done at 12 month follow-up and showed the retrolingual airway space had widened significantly without severe complications. Tongue base were decreased from Friedman III or IV to I or II.

Conclusion: The results showed that CCT was a safe, minimally invasive, effective and repeatable option for hypertrophy tongue, although long term observations need to be done.

Sleep Medicine

Comparison of Pre- and Postoperative Sleep in Pediatric Obstructive Sleep Apnea

Yoichi Nishimura (presenter); Wael A. Ahmed, MS

Objective: Adenotonsillectomy is a common procedure for treating pediatric obstructive sleep apnea (OSA). It improves child growth as well as his psychological status. The objectives of this study are to compare the results of pre and postoperative polysomnographic data in terms of sleep structure and to identify the difference of each sleep stage.

Method: This is a prospective study of sleep structures of pediatric OSA patients, done on 26 children with OSA. Mean age was 4.5 years. It was done in a tertiary university hospital. All children had adenotonsillectomy. Standard over-night

polysomnography was performed pre-operatively and one to three months postoperatively.

Results: We identified significant improvements of mean apnea hypopnea index (AHI) after the adeno-tonsillectomy from 17.1 to 3.53 ($P < .001$). Rapid eye movement (REM) sleep did not change significantly. Both Stage 2 and slow wave stage did not change significantly. We also identified significant improvement in the arousal index from 23 to 11 ($P < .001$).

Conclusion: We compared pre and post operative sleep structures in OSA children after adenotonsillectomy. We identified significant polysomnographic changes in the sleep structures in form of reduction of sleep stage 1 and arousal index. These polysomnographic parameters may lead to improvement of their physical and psychological conditions after the operation.

Sleep Medicine

Does Tension Matter? A Comparison of Genioglossus Advancement Using Tensiometry to Predict Successful Outcomes

Jamie Andrews (presenter); Jose Barrera

Objective: Evaluate the role of tension on the genioglossus muscle in patients undergoing genioglossus advancement for obstructive sleep apnea. We hypothesize that decreased tension and increased bicortical mandibular width will result in successful postoperative outcomes.

Method: Eleven patients underwent preoperative and postoperative polysomnography, nasal endoscopy, and subjective questionnaires. Intraoperatively, the bicortical width of the mandible and the force required to pull the window osteotomy forward was measured with a tensiometer. The preoperative and postoperative data collected was then compared against the intraoperative measurements.

Results: All patients completed pre- and postoperative evaluation. 82% (9/11) of patients were responders, defined as a greater than 50% reduction in AHI to an absolute level less than 15 events/h with no oxygen desaturations on postoperative polysomnography below 85%. A total of 18% (2/11) were nonresponders. All patients who were responders demonstrated a relative decreased tension (grams) and increased mandibular width (millimeters) with a tension to width ratio of less than sixty. All non-responders had a tension to width ratio of greater than sixty. Further, patients with the lowest ratio demonstrated the greatest subjective and objective improvement based on sleep questionnaires and polysomnography.

Conclusion: We conclude that decreased tension and increased mandibular width are positive predictive factors for postoperative success, and increased tension and narrow mandibular width are negative predictive factors for postoperative success. Thus, the tension to bicortical width ratio may be an independent predictor of postoperative success following genioglossus advancement.