Reader Digest
Digested by Dr. Tarek Kandil, MD. Consultant, students Hospital, Cairo University

1. Comprehensive management of congenital choanal atresia.

Brihaye P1, Delpierre I2, De Villé A3, Johansson AB4, Biarent D5, Mansbach AL6.

Abstract
OBJECTIVES:
To present results of a one-stage minimally invasive surgical procedure for congenital choanal atresia (CCA). Seven outcome measures were applied.

MATERIALS AND METHODS:
Retrospective study conducted between 1999 and 2015. The same endonasal endoscopic approach with multiflaps and no stenting was used on 36 children. The flaps were attached with fibrine glue. There were 50% unilateral and 50% bilateral cases, 70% primary and 30% secondary surgery. The mean age at primary surgery for bilateral atresia was 10 days and for unilateral atresia 4 years. Associated loco-regional disorders were: hypoplasia of the inferior turbinate, rhinopharyngeal stenosis and rhinopharyngeal web.

RESULTS:
The average follow-up time was 6 years, ranging from 1 to 14 years. There was a functionally patent choanae in 94% of children, and 6% showed severe restenosis with a diameter less than 4 mm, which needed one revision surgery each. Charge patients were not associated with worse outcome. There was no external nasal valve stenosis and no permanent Eustachian tube dysfunction. Synechiae occurred in 3 patients with hyperplastic inferior turbinate. No patients showed any disharmonious nasal growth. In neonates with isolated bilateral CCA, breast-suction could be started within 1 day (range 1-2 days), and pain-killers were needed on average for 1.5 days (range 1-4 days). The hospital stay for unilateral isolated CCA was on average 1.5 days (range 1-2 days) and for bilateral isolated CCA, 8 days (range 3-20 days). Postoperative procedures under a short general anesthesia were necessary in 12 cases, 10 of them were infants under 6 months of age.

CONCLUSION:
Surgery could be performed safely in the newborn in the early stage of life, even for unilateral atresia. Tendency for restenosis can be minimized by: 1. the construction of an as large as possible uni-neochoanae by removing the posterior part of the vomer and by drilling away the medial pterygoid; 2. in case of rhinopharyngeal stenosis, part of the endochondral clivus bone

should be resected; 3. all raw surfaces should be covered by multiple mucosal flaps secured with fibrin glue; 4. no stenting; 5. appropriate postoperative care.

Int J Pediatr Otorhinolaryngol. 2017 Jul;98:9-18.

2. Is there an association between migraine and allergic rhinitis?

Güvenç IA1, Acar M, Muluk NB, Kucukcan NE, Cingi C.

Abstract
We conducted a prospective study to evaluate nasal signs and symptoms and to perform allergen-specific immunoglobulin E (IgE) testing to investigate the relationship between migraine and allergic rhinitis. Our study group consisted of 40 patients diagnosed with migraine-22 men and 18 women, aged 21 to 38 years (mean: 25.7). We compared their findings with a control group of 40 healthy adults-15 men and 25 women, aged 19 to 36 years (mean: 25.1). Allergen-specific IgE measurements were obtained with six groups of allergens: fungi, grass pollens, tree pollens, wild herbs, house dust mite 1, and house dust mite 2. We found no significant difference between the migraine patients and the controls in the incidence of nasal signs and symptoms (i.e., discharge, congestion, itching, and sneezing) or inferior turbinate signs (i.e., color and edema). According to the IgE assays, 14 migraine patients (35.0%) were sensitized to one or more allergens, compared with 11 of the controls (27.5%); the difference was not statistically significant. Sensitization was highest for the grass pollens panel in both groups. Even though we did not find an association between migraine and allergic rhinitis, the recent literature supports a correlation between migraine and atopy. The two conditions share common neural pathways and common mediators, and they can be linked statistically in patients and their families. A pathophysiologic association between the two conditions seems more likely than an etiologic association. In this regard, future efforts could be focused on the determination of atopy in migraine patients and the therapeutic implications of this diagnosis

Ear Nose Throat J. 2017 Jun;96(6):E18-E23

3. Corrective Septorhinoplasty in Acute Nasal Bone Fractures.

Kim J1, Jung HJ1, Shim WS1.

Abstract

Objectives:
Closed reduction is generally recommended for acute nasal bone fractures, and rhinoplasty is considered in cases with an unsatisfactory outcome. However, concomitant rhinoplasty with

fracture reduction might achieve better surgical outcomes. This study investigated the surgical techniques and outcomes in patients who underwent rhinoplasty and fracture reduction concomitantly, during the acute stage of nasal bone fracture.
Methods:
Forty-five patients who underwent concomitant rhinoplasty and fracture reduction were enrolled. Nasal bone fractures were classified into 3 major types (type I, simple fracture; type II, fracture line that mimics nasal osteotomy; and type III, comminuted fracture) based on computed tomography images and preoperative facial images. Two independent otolaryngology-head and neck surgeons evaluated the surgical outcomes and telephone based survey were made to evaluate patients satisfaction.
Results:
Among 45 patients, there were 39 males and 6 females. Type I was the commonest type of fracture with 18 patients (40%), while the most frequently used surgical technique for corrective surgery was dorsal augmentation with 44 patients (97.8%). The mean visual analogue scale satisfaction score of the surgeons and patients were 7.62 and 8, respectively, with no significant differences between fracture types.

Conclusion:
Concomitant rhinoplasty with fracture reduction can be performed for acute nasal bone fracture patients, and it might lead to better aesthetic outcomes.

Clin Exp Otorhinolaryngol. 2017 Jun 13.

4. Intractable epistaxis: which arteries are responsible? An angiographic study.

de Bonnecaze G1,2, Gallois Y3, Chaynes P4,5, Bonneville F6, Dupret-Bories A7, Chantalat E4, Serrano E3.

Abstract
PURPOSE:
Epistaxis constitutes a significant proportion of the Otolaryngologist's emergency workload. Optimal management differs in relation to the anatomic origin of the bleeding. The outcome of our study was to determine which artery(ies) could be considered as the cause of severe bleeding in the context of severe epistaxis.

METHODS:
Fifty-five procedures of embolization preceded by angiography were reviewed. Medical records of interventionally treated patients were analysed for demographics, medical history, risk factors and clinical data. Angiographic findings were also assessed for active contrast extravasation (blush), vascular abnormality and embolised artery.

RESULTS:

Previous angiography showed an active contrast extravasation in only 20 procedures. The most common bleeding source was the sphenopalatine artery (SPA) followed by anterior ethmoïdal artery (AEA) and facial artery. Majority of multiple or bilateral extravasations occured in patients with systemic factors.

CONCLUSIONS:
A better understanding of the potential bleeding source might help and limit the risk of treatment failures. Our study confirms that the SPA is the most common cause of severe bleeding. We also emphasise the role of the AEA not only in traumatic context. Others arteries are rarely involved except in patients with comorbidities or frequent recurrences.

Surg Radiol Anat. 2017 May 16

5. Asthma outcomes after adenotonsillectomy: A systematic review.

Kohli N1, DeCarlo D2, Goldstein NA3, Silverman J3.

Abstract
OUTCOME OBJECTIVE:
For over fifty years, otolaryngologists, allergists, and immunologists have debated the effect of adenoidectomy or adenotonsillectomy on asthma outcomes in children. Although some have suggested that adenotonsillectomy may contribute to the subsequent development of asthma in children, others have argued that a common mechanism may cause both upper and lower airway disease, and that children who have symptoms severe enough to warrant adenotonsillectomy are also at increased risk of asthma and atopic disease. The link between asthma and upper airway disease may involve upper airway inflammation. Our goal is to perform a systematic review of asthma outcomes following adenoidectomy or adenotonsillectomy in the pediatric population. Our goal is to assess the effect of adenoidectomy or adenotonsillectomy on markers of asthma severity in children with obstructive sleep apnea.

METHODS:
We performed a systematic review using the PubMed, EMBASE, and CINAHL databases using search terms related to asthma, adenoidectomy, and adenotonsillectomy. Inclusion criteria were defined as pediatric subjects aged 18 years or younger with a history of asthma, undergoing adenoidectomy, or adenotonsillectomy for obstructive sleep apnea. Database studies and case studies with or without control groups were included in the study. Exclusion criteria were patients with follow-up greater than 1 year after surgery, craniofacial syndromes, or additional significant comorbidities.

RESULTS:

A total of 567 abstracts were identified; 549 were excluded immediately. Eighteen full-text articles were assessed for eligibility and four articles were included in the qualitative synthesis. These data are consistent in correlating adenotonsillectomy in asthmatic children with decreased asthma severity. Markers of asthma severity including respiratory medication use, emergency room visits for asthma-related symptoms, overall asthma symptoms, and asthma-related exacerbations were all significantly reduced following adenotonsillectomy.

CONCLUSION:
We present a systematic review of asthma outcomes following surgical intervention for sleep apnea in the pediatric population. All included studies found clinically significant reductions in markers of asthma severity after adenotonsillectomy. Though further prospective trials are needed to determine a causal relationship between adenotonsillectomy and modulation of asthma, the compilation of data suggest a definitive association.

Int J Pediatr Otorhinolaryngol. 2016 Nov;90:107-112.

6. The application of surgical procedure manager (SPM): first experience with FESS.

Feige K1,2, Gollnick I3, Schmitz P4, Strauss G4,3,5.

Abstract

In our hypothesis, the newly developed program SPM (surgical procedure manager) will ensure successful standardization and efficiency of the FESS (functional endoscopic sinus surgery) and therefore make a decisive contribution in terms of economization and improvement of intraoperative quality. Between 27th March 2015 and 8th October 2015, data from 259 FESS procedures were collected using the SPM. The study took place at the surgical desk, an operating room in the ACQUA clinic in Leipzig, Germany. 233 FESS (90%) of the total FESS (n = 259, 100%) were conducted entirely with SPM. 26 SPM terminations (10%) of 259 FESS remain, which are classified as actual SPM terminations-when the surgeon intentionally stops the SPM. The maximum time slot decreased clearly from 1 h 39 min (period A) to 1 h 10 min (period B). A time reduction can also be seen with the minimum duration of 13.5 min compared to 11 min. The variability of the time slot also decreases since the standard deviation is reduced by 4.5 min. On the basis of available recordings it can be postulated that the application of SPM is suitable for standardization for FESS. Standardization by means of SPM and minimal development can be recognized over a period of time. The SPM makes it possible to transfer the general advantages of mechanization on a concrete FESS and do not influence the medical processes nor even restrict the medical freedom. The users are still entirely free in the implementation of the respective procedure.

Eur Arch Otorhinolaryngol. 2017 Jul 7.

7. Fungal sinusitis

Lafont E1, Aguilar C1, Vironneau P2, Kania R2, Alanio A3, Poirée S4, Lortholary O5, Lanternier F6.

Abstract
Although sinusitis affects about 20 % of the population, fungal sinusitis is rare. Aspergillus sp. are most frequently implicated. Fungal sinusitis represents a wide spectrum of disorders, including acute or chronic and invasive or non-invasive forms. Invasive fungal sinusitis may develop in an immunocompromised or diabetic patient, whereas non-invasive fungal sinusitis should be considered in a chronic situation, resistant to antibiotics in immunocompetent patients. Allergic fungal sinusitis is related to hypersensitivity of the host to the fungus. The diagnosis of these infections requires radiological examination and endoscopy with mucosal biopsies examined histologically and mycologically in order to distinguish the different types of sinusitis. In the non-invasive forms, surgical treatment is essential, sometimes combined with antifungal and anti-inflammatory treatment. The invasive forms require antifungal treatment, combined with surgery in some forms, particularly mucormycosis.

Rev Mal Respir. 2017 Jun;34(6):672-692

8. Anosmia-A Clinical Review.

Boesveldt S[1], Postma EM[1,2], Boak D[3], Welge-Luessen A[4], Schöpf V[5,6], Mainland JD[7,8], Martens J[9], Ngai J[10], Duffy VB[11].

Abstract
Anosmia and hyposmia, the inability or decreased ability to smell, is estimated to afflict 3-20% of the population. Risk of olfactory dysfunction increases with old age and may also result from chronic sinonasal diseases, severe head trauma, and upper respiratory infections, or neurodegenerative diseases. These disorders impair the ability to sense warning odors in foods and the environment, as well as hinder the quality of life related to social interactions, eating, and feelings of well-being. This article reports and extends on a clinical update commencing at the 2016 Association for Chemoreception Sciences annual meeting. Included were reports from: a patient perspective on losing the sense of smell with information on Fifth Sense, a nonprofit advocacy organization for patients with olfactory disorders; an otolaryngologist's review of clinical evaluation, diagnosis, and management/treatment of anosmia; and researchers' review of recent advances in potential anosmia treatments from fundamental science, in animal, cellular, or genetic models. As limited evidence-based treatments exist for anosmia, dissemination of

information on anosmia-related health risks is needed. This could include feasible and useful screening measures for olfactory dysfunction, appropriate clinical evaluation, and patient counseling to avoid harm as well as manage health and quality of life with anosmia.

Chem Senses. 2017 May 22.

9. The papillomas of the sinonasal tract. A comprehensive review.

Leoncini G1, Zanetti L2.

Abstract
Papillomas are uncommon tumors of the sinonasal tract histologically derived from the Schneiderian membrane. Three distinctive variants are described, the exophytic, the inverting and the oncocytic types. On physical examination, their appearance varies from exophytic-fungiform seen in the exophytic variant, to polypoid-papillary in both the inverting and oncocytic variant. The presence of an asymptomatic mass or epistaxis and unilateral nasal obstruction are the typical presenting symptoms. Clinically they tend to recur and, although benign, they may erode the bone laminas by pressure, especially the inverting type, causing proptosis and other co-morbidities. Malignant transformation is seen both synchronously, on a pre-existing papilloma, and metachronously after several recurrences of papilloma. Schneiderian papillomas are at a date a topic of controversy regarding their etiology, pathogenesis and biological behavior. Furthermore, histologic criteria to assess dysplasia and malignant transformation are ill-defined. The present study aims to comparatively review the histologic types of papillomas, their etiology, the currently available criteria for malignant transformation, their treatment and prognosis

Pathologica. 2017 Mar;109(1):31-34

10. A Review of Nasal, Paranasal, and Skull-base Tumors Invading the Orbit.

Jørgensen M1, Heegaard S2.

Abstract
Tumors that invade the orbit are uncommon. The majority are meningiomas arising from the sphenoid ridge (66 %). Others are bone and cartilage tumors arising from the surrounding bones surrounding the orbit, pituitary adenomas, and epithelial tumors arising from the paranasal sinuses and nasal cavity. Meningiomas occur more often in females, whereas epithelial tumors have a predilection for males. Meningiomas and epithelial tumors typically present in the sixth

decade of life, whereas bone tumors tend to affect individuals in their third decade of life. Patients often present with a combination of ophthalmological and otorhinolaryngological symptoms, including proptosis, pain, decreased visual acuity, restrictions in motility of the eye, epistaxis, and nasal obstruction. Sarcomas and benign bone and cartilage tumors arise from surrounding structures, whereas carcinomas usually arise from the paranasal sinuses. Surgery is the mainstay of treatment. Depending on the aggressiveness and histology of the tumor, surgery may be combined with radiation and chemotherapy. The prognosis is generally poor, but varies depending on histology and cell origin, size of the tumor, and degree of invasion. Meningiomas and benign bone tumors have the best prognoses. Sinonasal undifferentiated carcinomas, small cell neuroendocrine carcinomas, osteosarcomas and rhabdomyosarcomas have poorer prognoses.

Surv Ophthalmol. 2017 Jul 21.