



Reader Digest

**Digested by Dr. Tarek Kandil, MD. Consultant,
Students Hospital, Cairo University**

1-Transnasal endoscopic treatment of bilateral choanal atresia in newborns using balloon dilatation: Own results and review of literature.

Riepl R, Scheithauer M, Hoffmann TK, Rotter N.

Abstract

OBJECTIVES:

Congenital choanal atresia is a complete obliteration of the posterior nasal aperture leading to life-threatening airway emergencies. Several surgical options including sublabial, transpalatal, transseptal or external approaches have been developed for the repair of choanal atresia. So far, no gold standard has been established, but transnasal endoscopic approaches have been favored by many surgeons in recent years.

METHODS:

Since 2008 a standard procedure for bilateral choanal atresia repair in neonates using an endoscopic transnasal approach supported by balloon dilatation has been established at the Department of Otorhinolaryngology at Ulm University Medical Center. During the last five years, six cases of bilateral choanal atresia were diagnosed and treated, including two male and four female patients aged between three days and two months, at the date of surgery. All interventions were performed in transnasal endoscopic technique. In all patients the abnormally thick posterior vomer and the atretic bony plate were resected and the mucosa was perforated. A balloon dilator was used to dilate the neochoanae and prevent restenosis. All six patients were intraoperatively stented for at least six weeks.

RESULTS:

All six neonates with bilateral choanal atresia, who were operated in endoscopic transnasal technique, had patent neo-choanae on both sides. No severe postoperative complications were found. The number of revisions depends on the age at primary surgery.

CONCLUSIONS:

Endonasal endoscopic approach and balloon dilatation is a safe, reproducible technique for surgical repair of choanal atresia. We recommend the use of bilateral stents, especially in very young patients, as a prerequisite to prevent early restenosis.

Int J Pediatr Otorhinolaryngol. 2014 Mar; 78(3):459-64



2-ELLIPSE Study: A Phase 1 study evaluating the tolerance of bevacizumab nasal spray in the treatment of epistaxis in hereditary hemorrhagic telangiectasia.

Dupuis-Girod S, Ambrun A, Decullier E, Samson G, Roux A, Fargeton AE, Rioufol C, Schwiertz V, Disant F, Chapuis F, Donazzolo Y, Paintaud G, Edery P, Faure F.

Abstract

Background: Hereditary hemorrhagic telangiectasia (HTT) is a dominantly inherited genetic vascular disorder in which epistaxis is the most frequent manifestation, responsible for high morbidity. Management of this symptom has no standard, and local treatments are often aggressive. Their efficacy is variable and has not been proven. Anti-angiogenic drugs, such as bevacizumab, are a new treatment strategy. Its systemic administration in patients with HHT improves liver damage-related symptoms and epistaxis. To limit the systemic adverse effects of bevacizumab and to ease administration, a local administration seems suitable. **Primary objective:** To evaluate the tolerance of increasing doses of bevacizumab administered as a nasal spray in patients with HHT-related epistaxis. **Secondary objectives** were to study the bioavailability and efficacy of bevacizumab against epistaxis when given as a nasal spray. **Methodology:** Phase 1, randomized, double-blind, placebo-controlled, monocentric study performed sequentially (dose escalation) on 5 groups of 8 patients. Each group was made up of 6 verum and 2 placebos. Five increasing doses of bevacizumab nasal spray (25 mg/mL) were evaluated: 12.5, 25, 50, 75 and 100 mg. **Results:** A total of 40 patients were included between October 2011 and October 2012. Bevacizumab nasal spray was well tolerated in all patients and the drug was not detected in their serum. No dose limiting toxicity was observed. No efficacy was observed at any dose in this study. **Conclusion:** Based on these results, bevacizumab nasal spray is a safe treatment of epistaxis in HHT. However, a randomized Phase 2 study is needed to determine its efficacy. **Trial Registration:** ClinicalTrials.gov Identifier #NCT01507480.

MAbs. 2014 Jan 30; 6 (3).

3-Velopharyngeal Anatomy in Patients with Obstructive Sleep Apnea versus Normal Subjects.

Finkelstein Y, Wolf L, Nachmani A, Lipowezky U, Rub M, Shemer S, Berger G.

Abstract

PURPOSE:

Obesity can cause disturbed breathing and is one of the most significant risk factors for obstructive sleep apnea (OSA). However, the anatomic basis of OSA and, specifically, the anatomic mechanisms leading from obesity to OSA are still unclear. We examined the anatomic features of the velopharynx in patients with OSA



versus those without in correlation with the body mass index (BMI), age, history of snoring, and OSA severity and re-evaluated the contribution of adding a frontal view to the cephalometric analysis of patients with OSA.

MATERIALS AND METHODS:

Lateral and frontal cephalometric measurements were taken to assess the velopharyngeal anatomic features of 306 men with various degrees of OSA and 64 men without OSA and without a history of snoring. The demographic, polysomnographic, and cephalometric features were compared.

RESULTS:

The patients with OSA had an increased pharyngeal length, thicker velum, a thicker posterior pharyngeal wall, a reduced pharyngeal width, and a consequent narrowing of the pharyngeal lumen. As the BMI increased, the OSA severity increased. Also, in parallel, the velum and posterior pharyngeal wall thickness increased and the pharyngeal width decreased. Three types of velopharyngeal narrowing, with an increased occurrence in severe degrees of OSA, were identified: bottle shape, hourglass shape, and tube shape. These aerodynamically unfavorable changes might cause increased upper airway resistance, explaining the development of both OSA and hypoventilation syndrome in obese patients.

CONCLUSIONS:

Velopharyngeal thickening and lumen narrowing were shown to be features of obese men with OSA. However, these features developed only above a threshold BMI value. The combination of frontal and lateral cephalometry is important for comprehensive evaluation of patients with OSA.

J Oral Maxillofac Surg. 2013 Dec 14.

4-Occupational irritant and allergic rhinitis.

Shusterman D.

Abstract

The upper airway (extending from the nares to larynx) fulfills essential physiologic functions, including sensation, air conditioning, filtration, and communication. As the portal of entry for the respiratory tract, the upper airway's sentinel function is performed by the olfactory and trigeminal nerves. Sensory (eye, nose and throat) irritation figures prominently in symptom reporting in so-called "problem buildings," as well as in industrial exposures to irritant gases, vapors, and smokes. Both irritants and allergens can alter function in the upper airway, leading to loss of air conditioning and filtering due to airflow obstruction and hypersecretion. Increasing evidence points to a "unified airway" model of pathogenesis (in which rhinitis may precede the development of asthma). The spectrum of occupational irritant- and allergen-related upper airway health effects-



Including sensory irritation, olfactory dysfunction, rhinitis, sinusitis, nasal septal perforation, and sinonasal cancer-is reviewed in this article.

Curr Allergy Asthma Rep. 2014 Apr; 14(4):425

5-Invasive fungal sinusitis in a healthy athlete due to long-term anabolic steroid use.

Kim IA, Thompson CF, Kedeshian PA, Palma-Diaz F, Suh JD.

Abstract

Invasive fungal rhinosinusitis is a potentially fatal infection that affects immunocompromised patients. Prognosis is generally poor despite aggressive medical and surgical treatments. We present the first reported case of invasive fungal sinusitis in a healthy 18-year-old male athlete who was taking anabolic steroids. The effects of excessive AAS use on the immune system are not fully understood, but there may be consequences at supraphysiological concentrations. This case demonstrates potential immunomodulatory effects of anabolic steroids and highlights a previously unknown cause of invasive fungal sinusitis.

Laryngoscope. 2014 Jan 24.

6-Carcinoma Ex-Schneiderian Papilloma (Malignant Transformation): A Clinicopathologic and Immunophenotypic Study of 20 Cases Combined with a Comprehensive Review of the Literature.

Nudell J, Chiosea S, Thompson LD.

Abstract

Schneiderian papilloma (SP) are uncommon tumors with malignant transformation even less common. The histologic criteria to define malignant transformation are not well developed nor is the immunohistochemical profile reported in a large series of carcinomas. 20 cases of malignant transformation of SP included 7 females and 13 males, aged 38-86 years (mean 60.7 years). Patients presented most frequently with a mass (n = 11) and obstructive symptoms (n = 7), present for 38.7 months (mean). Most patients had no previous history of SP (n = 13); metachronous carcinoma was identified in 7 patients an average of 34.4 months after the first diagnosis of SP, with 1-4 recurrences of SP. With a mean size of 4.1 cm, the majority of tumors involved a combination of more than one anatomic site (n = 10), followed by the maxillary sinus only (n = 5) or nasal cavity only (n = 3). Histologically, 17 were inverted and 3 exophytic type SP. There were 17 squamous cell carcinomas, 2 mucoepidermoid carcinomas and 1 sinonasal undifferentiated carcinoma, comprising from 10 to 95 % of the tumor volume. Malignant histologic features included atypical mitoses, necrosis, bone invasion, lymphovascular



invasion, decreased transmigrating neutrophils, paradoxical maturation, dyskeratosis and/or perineural invasion (n = 3). Patients tended to present with advanced stage (n = 14, Stage III and IV). Immunohistochemical studies showed positive reactions in the malignancies for CK5/6 (86 %), p63 (86 %), CK7 (luminal, 50 %), p53 (83 %), and p16 (25 %). In situ hybridization detected human papillomavirus in 26 %. Surgery was often accompanied by radiation therapy (n = 13), with a mean of 2.4 years of follow-up. Five patients developed a recurrence between

0.8 and 3.3 years. Carcinomas ex-SP are less common and are associated with better outcome than previously reported. Patients tend to present with a synchronous carcinoma, developing in an inverted type SP, with squamous cell carcinoma the most common malignancy. Development of metachronous carcinomas ex-SP was always preceded by SP recurrence in this series.

Head Neck Pathol. 2014 Feb 12

7-Exclusive Endoscopic Resection of Juvenile Nasopharyngeal angiofibroma: A Systematic Review of the Literature.

Khoeir N, Nicolas N, Rohayem Z, Haddad A, Abou Hamad W.

Abstract

Objective: To systematically review the exclusive endoscopic treatment of juvenile nasopharyngeal angiofibroma in the literature to define the clinical features in terms of staging and the treatment outcomes in terms of bleeding, recurrence, residual tumor, and complications. Data Sources Online databases, including PubMed and EMBASE, were used. Reference sections of identified studies were examined for additional articles. **Review Methods:** The literature was searched by 2 reviewers with the following inclusion criteria: English or French language and exclusive endoscopic treatment of juvenile nasopharyngeal angiofibroma. We were only able to perform a meta-analysis on the categorical outcomes using DerSimonian and Laird random effects models. **Results** Ninety-two studies were included with a majority of retrospective studies (54/92; 58.6%). No randomized controlled trials were found. A total of 821 patients were identified. The Radowski classification was the most commonly used (29/92; 31.15%). The mean operative blood loss was 564.21 mL (minimum, 20 mL; maximum, 1482 mL). It was 414.6 mL (minimum, 20 mL; maximum, 1000 mL) and 774.2 mL (minimum, 228 mL; maximum, 1482 mL), respectively, in the group with and without embolization. No conclusion could be made because it was not stratified by tumor stage and because of the absence of randomized controlled trials. The random effect estimate of recurrence was 10% (95% confidence interval [CI], 8.3-11.7). It was 9.3% (95% CI, 7.2-11.5) for complications and 7.7% (95% CI, 5.4-10.1) for residual tumor. **Conclusion:** The endoscopic treatment is an evolving modality. It is considered today the treatment of choice. A new classification system based on the endoscopic approach should be proposed in future studies.

Otolaryngol Head Neck Surg. 2013 Dec 31



8-Predictors of olfactory dysfunction in rhinosinusitis using the brief smell identification test.

Alt JA, Mace JC, Buniel MC, Soler ZM, Smith TL.

Abstract

OBJECTIVES/HYPOTHESIS:

Associations between olfactory function to quality-of-life (QOL) and disease severity in patients with rhinosinusitis is poorly understood. We sought to evaluate and compare olfactory function between subgroups of patients with rhinosinusitis using the Brief Smell Identification Test (B-SIT).

STUDY DESIGN:

Cross-sectional evaluation of a multicenter cohort.

METHODS:

Patients with recurrent acute sinusitis and chronic rhinosinusitis with and without nasal polyposis were prospectively enrolled from three academic tertiary care sites. Each subject completed the B-SIT, in addition to measures of disease-specific QOL. Patient demographics, comorbidities, and clinical measures of disease severity were compared between patients with normal (BSIT ≥ 9) and abnormal (BSIT < 9) olfaction scores. Regression modeling was used to identify potential risk factors associated with olfactory impairment.

RESULTS:

Patients with rhinosinusitis (n = 445) were found to suffer olfactory dysfunction as measured by the B-SIT (28.3%). Subgroups of rhinosinusitis differed in the degree of olfactory dysfunction reported. Worse disease severity, measured by computed tomography and nasal endoscopy, correlated to worse olfaction. Olfactory scores did not consistently correlate with the Rhinosinusitis Disability Index or Sinonasal Outcome Test scores. Regression models demonstrated nasal polyposis was the strongest predictor of olfactory dysfunction. Recalcitrant disease and aspirin intolerance were strongly predictive of worse olfactory function.

CONCLUSIONS:

Olfactory dysfunction is a complex, multifactorial process found to be differentially expressed within subgroups of rhinosinusitis. Olfaction was associated with disease severity as measured by imaging and endoscopy, with only weak associations to disease-specific QOL measures.

Laryngoscope. 2014 Jan 8.



9-The optimal evaluation and management of patients with a gradual onset of olfactory loss.

Enriquez K, Lehrer E, Mullol J.

Abstract

PURPOSE OF REVIEW:

The aim of this review is to provide an overview of the causes of olfactory dysfunction, their evaluation and management, with a main focus on the gradual/progressive loss of smell.

RECENT FINDINGS:

As the sense of smell gives us essential information about our environment, its loss can cause nutritional and social problems while threatening an individual's safety. Recent surveys have shown quite a substantial prevalence of hyposmia (one out of four people) and anosmia (one out of 200 people) in a variety of populations.

SUMMARY:

Nasal inflammatory diseases such as allergic rhinitis and predominantly chronic rhinosinusitis account for the major and common causes of gradual/progressive loss of smell. However, they are also among the most successfully treated forms of olfactory dysfunction. The management of gradual/progressive smell deficit must always address its etiological causes. In most cases, a detailed medical history and nasal examination, smell testing, and imaging will help to establish an appropriate diagnosis. In addition to anti-inflammatory therapy, mainly nasal and systemic corticosteroids, recent investigations on smell training suggest that the controlled exposure to selected odors may increase olfactory performance.

Curr Opin Otolaryngol Head Neck Surg. 2014 Feb;22(1):34-41

10-An introduction to the septal extension graft.

Kim MH, Choi JH, Kim MS, Kim SK, Lee KC.

Abstract

The septal extension graft is a very useful method of controlling nasal lengthening and tip projection, rotation, and shape by fixing a graft to the septum, which leads to a strong supporting structure. Enhancing graft stability is important for better long-term outcomes and minimizing complications or relapse, and even more efficient application of these methods is needed for East Asians who lack enough cartilage to be harvested in addition to possessing a weak cartilage framework. In this paper, the methods for overcoming the drawbacks of the septal extension graft, such as instability, a fixed tip, and insufficiency of cartilage, are presented, and the applications of each method for greater satisfaction with surgical outcomes are also discussed.

Arch Plast Surg. 2014 Jan; 41(1):29-34