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

1. Congenital nasal neuroglial heterotopia and encephaloceles: An update on current evaluation and management.

Adil E1,2, Robson C3,2, Perez-Atayde A4,2, Heffernan C5, Moritz E1, Goumnerova L6, Rahbar R1,2.

Abstract

OBJECTIVES/HYPOTHESIS:

To describe our experience and current management approach for congenital nasal neuroglial heterotopia (NGH) and encephaloceles.

STUDY DESIGN:

Retrospective chart review at a tertiary pediatric hospital from 1970 to 2013.

METHODS:

Thirty patients met inclusion criteria: 21 NGH and nine encephaloceles. Data including demographics, pathology, imaging modality, surgical approach, resection extent, outcomes, and complications were analyzed.

RESULTS:

Fourteen NGH patients (67%) presented with an internal nasal mass and nasal obstruction. Three patients (14%) presented with an external nasal mass and four (19%) had a mixed lesion. Median age at surgery was 0.51 years (interquartile range 1.32 years). Thirteen (62%) had an intranasal endoscopic approach. Median operative time was 1.6 hours (interquartile range 1.2 hours), and there were no major complications. Nine patients with encephalocele were identified: six (67%) presented with transethmoidal encephaloceles, two (22%) presented with nasoethmoidal encephaloceles, and one (11%) presented with a nasofrontal lesion. The median age at surgery was 1.25 years (interquartile range 1.4 years). All patients required a craniotomy for intracranial extension. Median operative time was 5 hours (interquartile range 1.9 hours), and eight patients (88%) had a total resection. Length of stay ranged from 3 to 14 days.

CONCLUSION:

Nasal neuroglial heterotopia and encephaloceles are very rare lesions that require multidisciplinary evaluation and management. At our institution, there has been a shift to magnetic resonance imaging alone for the evaluation of NGH to avoid radiation exposure. Endoscopic extracranial resection is feasible for most intranasal and mixed NGH without an increase in operative time, residual disease, or complications.

LEVEL OF EVIDENCE: 4. Laryngoscope, 2016

Laryngoscope. 2016 Jan 13.

2. Impact of adenotonsillectomy on vocal emission in children.

Dimatos SC1, Neves LR2, Beltrame JM3, Azevedo RR4, Pignatari SS2.

Abstract

INTRODUCTION:

Adenotonsillectomy is the most common surgery performed by otolaryngologists in pediatric age, and one of the most frequently asked questions about the postoperative period is whether there is a potential for change in vocal pattern of these children.

OBJECTIVE:

To evaluate the impact of adenotonsillectomy in the voice emission pattern of children with hypertrophy of palatine and pharyngeal tonsils.

METHODS:

This is a prospective study in which we carried out perceptual auditory assessments and acoustic analysis of 26 children with adenotonsillar hypertrophy at three time points: before surgery, one month and three months after surgery. The following acoustic parameters were estimated using the Praat software: fundamental frequency, jitter, shimmer, and harmonic-noise ratio.

RESULTS:

A statistically significant change was found between shimmer and harmonic-noise ratio during vowel /u/ production between the preoperative and 1st month postoperative time points. No significant differences were detected for acoustic parameters between preoperative analysis and that of the 3rd month post-operation.

CONCLUSION:

Transient changes in acoustic parameters occur in children with adenotonsillar hypertrophy submitted to adenotonsillectomy, progressing to normalization in the 3rd postoperative month.

Braz J Otorhinolaryngol. 2015 Dec 14.

3. Epistaxis in hereditary hemorrhagic telangiectasia: an evidence based review of surgical management.

Chin CJ1, Rotenberg BW2, Witterick IJ3.

Abstract

Patients with Hereditary Hemorrhagic Telangiectasia (HHT) frequently present with epistaxis. Up to 98 % of these patients will have epistaxis at some point in their life. There are multiple ways to deal with this problem, including conservative, medical and surgical options. We present a case and an update on the treatment options for HHT, with a focus on the newer

J Otolaryngol Head Neck Surg. 2016 Jan 12;45(1):3.

4. Endoscopic Management of Esthesioneuroblastoma.

Roxbury CR1, Ishii M1, Gallia GL2, Reh DD3.

Abstract

Esthesioneuroblastoma is a rare malignant tumor of sinonasal origin. These tumors typically present with unilateral nasal obstruction and epistaxis, and diagnosis is confirmed on biopsy. Over the past 15 years, significant advances have been made in endoscopic technology and techniques that have made this tumor amenable to expanded endonasal resection. There is growing evidence supporting the feasibility of safe and effective resection of esthesioneuroblastoma via an expanded endonasal approach. This article outlines a technique for endoscopic resection of

esthesioneuroblastoma and reviews the current literature on esthesioneuroblastoma with emphasis on outcomes after endoscopic resection of these malignant tumors.

Otolaryngol Clin North Am. 2016 Feb;49(1):153-65.

5. Recent pharmacological developments in the treatment of perennial and persistent allergic rhinitis.

Klimek L1, Mullol J2, Hellings P3, Gevaert P4, Mösges R5, Fokkens W6.

Abstract

INTRODUCTION:

Allergic rhinitis (AR) has a major negative impact on patients' quality of life (QoL) and carries a high socio-economic burden. This is particularly the case for patients who experience symptoms for extended periods of time (i.e. those with perennial (PAR) or persistent AR (PER), depending on the classification system used). This review covers available pharmacological advances and recent developments in the treatment of PAR or PER. Areas covered: Pharmacological AR treatment is used to reduce symptom burden and help restore patients' normal daily routine. Traditionally, non-sedating antihistamines and intranasal corticosteroids (INS) were the two drug classes recommended for use first line. These, along with anti-leukotrienes, decongestants, mast cell stabilizers and anti-cholinergics, constituted the bulk of the AR treatment arsenal. MP29-02 (Dymista®, Meda, Solna, Sweden) is the most recent addition to that arsenal. It is a novel intranasal formulation of azelastine hydrochloride (AZE) and fluticasone propionate (FP) delivered in a single spray and has surpassed available therapies in terms of symptom control and treatment response. Other relatively new treatments for PAR or PER include H3 antihistamines, toll-like receptor (TLR) agonists, cellulose powders and micro-emulsions, novel biomolecular formulations and omalizumab. Each of these new additions is reviewed here. Expert opinion: A new AR drug class has recently been introduced (i.e. RO1AD58). Currently MP29-02 is the only treatment option within this drug class. It can be estimated that combination treatments like MP29-02 will become the mainstay of PAR and PER therapy since use will result in better compliance, improved efficacy over INS and a faster response together with good levels of tolerability. The challenge is to find other equally, or more effective, combination treatments, as has been the therapeutic standard in bronchial asthma for decades. The potential of biologics, as well as TLR-agonists and other new treatment options needs to be further evaluated.

Expert Opin Pharmacother. 2016 Jan 22.

6. Comprehensive review on endonasal endoscopic sinus surgery.

Weber RK1, Hosemann W2.

Abstract

Endonasal endoscopic sinus surgery is the standard procedure for surgery of most paranasal sinus diseases. Appropriate frame conditions provided, the respective procedures are safe and successful. These prerequisites encompass appropriate technical equipment, anatomical oriented surgical technique, proper patient selection, and individually adapted extent of surgery. The range of endonasal sinus operations has dramatically increased during the last 20 years and reaches from partial uncinectomy to pansinus surgery with extended surgery of the frontal (Draf type III), maxillary (grade 3-4, medial maxillectomy, prelacrimal approach) and sphenoid sinus. In addition there are operations outside and beyond the paranasal sinuses. The development of surgical technique is still constantly evolving. This article gives a comprehensive review on the most recent state of the art in endoscopic sinus surgery according to the literature with the following aspects: principles and fundamentals, surgical techniques, indications, outcome, postoperative care, nasal packing and stents, technical equipment.

GMS Curr Top Otorhinolaryngol Head Neck Surg. 2015 Dec 22;14:Doc08.

7. Evaluation of resident's training for endoscopic sinus surgery using a sheep's head.

Delgado-Vargas B1, Romero-Salazar AL2, Reyes Burneo PM2, Vásquez Hincapie C2, de Los Santos Granado G2, Del Castillo López R2, Frágola Arnau C2, Cobeta Marco I2.

Abstract

Training in functional endoscopic sinus surgery (FESS) is an essential part of each ENT resident and it takes place on a very fragile area. This study focus on showing the learning curve of FESS, using an anatomical model such as the sheep's head. Four residents in our centre performed dissections. Each of these residents operated eight sheep's head. They performed an endoscopic septoplasty followed by maxillary antrostomy, total ethmoidectomy and frontal sinusotomy on every head. A staff member guided all procedures and checked for the appropriate dissection and complications occurred. Analysis was made upon the residents' performance of their first four septoplasties and eight nasal sides against their subsequent performance of the same. Final procedures presented better outcomes than the initial ones on every step of them. Results were measured by means of decrease of time ($P < 0.0001$) and complications, showing no major complications on the latest ones. Sheep's head is a suitable substitute for the cadaveric human head, to obtain the surgical skills needed

for FESS procedures. Sheep's nasal cavity allows gaining dexterity and it is an easy model to obtain.

Eur Arch Otorhinolaryngol. 2016 Jan 6.

8. The spectrum of allergic fungal diseases of the upper and lower airways.

Rodrigues J1, Caruthers C1, Azmeh R1, Dykewicz MS1, Slavin RG1, Knutsen AP1.

Abstract

Fungi cause a wide spectrum of fungal diseases of the upper and lower airways. There are three main phyla involved in allergic fungal disease: (1) Ascomycota (2) Basidiomycota (3) Zygomycota. Allergic fungal rhinosinusitis (AFRS) causes chronic rhinosinusitis symptoms and is caused predominantly by Aspergillus fumigatus in India and Bipolaris in the United States. The recommended treatment approach for AFRS is surgical intervention and systemic steroids. Allergic bronchopulmonary aspergillosis (APBA) is most commonly diagnosed in patients with asthma or cystic fibrosis. Long term systemic steroids are the mainstay treatment option for ABPA with the addition of an antifungal medication. Fungal sensitization or exposure increases a patient's risk of developing severe asthma and has been termed severe asthma associated with fungal sensitivity (SAFS). Investigating for triggers and causes of a patient's asthma should be sought to decrease worsening progression of the disease

Expert Rev Clin Immunol. 2016 Jan 16.

9. Pathophysiology of sinusitis of odontogenic origin.

Taschieri S1, Torretta S2, Corbella S1, Del Fabbro M1, Francetti L1, Lolato A1, Capaccio P1.

Abstract

Sinusitis of odontogenic origin, which is frequently encountered in routine otolaryngological and dental clinical practice, has been described as a reactive maxillary inflammation secondary to maxillary tooth infection or trauma to an odontogenic disease of maxillary bone, dental extractions, implant placement, or endodontic treatment impairing the integrity of the Schneiderian membrane. The aim of the present review was to investigate and discuss the most recent pathophysiological findings, predisposing odontogenic factors, microbiology, and the possible involvement of bacterial biofilms (BB) in the development of sinusitis. The narrative literature review showed that there might be a correlation between the bacteria present in pathological teeth in communication with the sinus and those found in infected sinus. The formation of a BB might be also involved in the

etiopathogenesis of sinusitis of odontogenic origin. In conclusion, the true origin of odontogenic sinusitis is still unresolved. In clinical terms, the choice of suitable therapy depends on the characteristics of the biofilm. Further microbiological studies are required to better investigate the role of BB

J Investig Clin Dent. 2015 Dec 14

10. Low-Grade Epithelial Proliferations of the Sinonasal Tract.

Bullock MJ1,2.

Abstract

Low-grade epithelial proliferations of the sinonasal tract include Schneiderian papillomas, respiratory epithelial adenomatoid hamartoma, seromucinous hamartoma and low-grade non-intestinal adenocarcinoma. There is considerable overlap in their clinical presentation, endoscopic appearance, and imaging features. Although well-described diagnostic criteria exist, a definitive diagnosis may be difficult to reach on a small biopsy. Schneiderian papillomas are divided into fungiform, inverted, and oncocytic types, each with characteristic clinical and morphological features. The latter two may progress to malignancy. The majority are still considered to be HPV-related. Two lesions are designated as hamartomas, but their pathogenesis remains uncertain, with inflammatory and neoplastic origins proposed. Respiratory epithelial adenomatoid hamartoma is increasingly being recognized for its association with chronic rhinosinusitis and olfactory cleft site of origin. Seromucinous hamartoma has gained attention in recent years and overlaps with both respiratory epithelial adenomatoid hamartoma and low-grade non-intestinal adenocarcinoma. Controversy surrounds their distinction, particularly from low-grade adenocarcinoma. The latter generally is cured by complete excision, with a 26 % risk of recurrence but rare metastases and deaths from disease

Head Neck Pathol. 2016 Mar;10(1):47-59.