Pan Arab Rhinology Society
PARS Reader's Digest

Reader Digest

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

Introduction

This newsletter is intended to provide information that is useful to the student and specialist in the field of rhinology and allergic disorders.

The selected recent material represents important fundamental knowledge, current trends or recent developments in this field.

We hope that this newsletter will help the reader have a greater understanding of rhinology and allergic disorders.

1. Prognostic Factors and Management of Patients with Choanal Atresia.

Moreddu E1, Rossi ME2, Nicollas R2, Triglia JM2.

Abstract

OBJECTIVE:

To analyze prognostic factors in the management of patients with choanal atresia.

STUDY DESIGN:

This is a review of 114 patients operated on for choanal atresia in a tertiary care center between November 1986 and November 2016, including clinical characteristics, surgical management, and postoperative course with final nasal patency. The data were collected in a database that was updated over time.

RESULTS:

Among the 114 patients, 78 were female, 77 presented with unilateral choanal atresia, and 37 presented with bilateral unilateral choanal atresia, corresponding to 151 nasal fossae. Forty-seven patients had associated abnormalities (41.2%), including CHARGE, diagnosed in 20 children (17.5%). At the end of follow-up, 91 patients (79.8%) had normal choanal patency. The identified risk factors of surgical failure were age <6 months ($P = .004$), weight <5 kg ($P = .007$), and bilateral choanal atresia ($P < .001$). The type of atresia, presence of associated abnormalities, surgical approach, stenting, and use of mitomycin were not significantly linked with the surgical results.

CONCLUSIONS:

This series highlights the importance of the timing of surgery, which is guided by the clinical ability of the infant to tolerate the procedure. Endoscopic approaches are widely performed, but a transpalatal approach, necessary in some cases of bilateral choanal atresia, does not alter the results. Unilateral choanal atresia surgery should be delayed after age 6 months and/or weight >5 kg when possible.

J Pediatr. 2019 Jan;204:234-239.e1.

2. Risk factors for intraoperative saddle nose deformity in septoplasty patients.

Lee JJ1, Hong SD1, Dhong HJ1, Chung SK1, Kim HY2.

Abstract

INTRODUCTION:

Septoplasty is one of the most common otolaryngologic procedures. Previous studies have reported that the overall rate of significant change in cosmetic appearance of the nose after septoplasty ranged from 0.4 to 3.4%, and saddle nose was the most commonly cited deformity. In this study, we evaluated the risk factors for intraoperative saddle nose in a group of septoplasty patients.

METHODS:

This case-control study (1:2 case:control) was conducted based on retrospective chart review. Intraoperative saddle nose was observed in 108 (5.1%) of 2106 patients who underwent septoplasty in our center between January 2008 and December 2017. The control group consisted of 216 randomly selected, hospital-matched septoplasty patients who had no intraoperative saddle nose deformity in the same period. The demographic data, preoperative endoscopic findings, and surgical procedures of the two groups were analyzed to identify possible risk factors of intraoperative saddle nose deformity.

RESULTS:

The mean ages of the two groups were 34.8 years (saddle group) and 33.2 years (control group). In multivariate logistic regression analysis, clinical risk factors associated with intraoperative saddle nose were female gender (OR 3.39; 95% CI 1.76-6.54; $p < 0.01$), severe caudal septal deviation (OR 2.22; 95% CI 1.30-3.79; $p = 0.003$), and intraoperative finding of septal cartilage fracture (OR 3.96; 95% CI 1.92-8.19; $p < 0.01$).

CONCLUSIONS:

Severe caudal septal deviation, intraoperative fracture of septal cartilage, and female gender were risk factors for intraoperative saddle nose deformity in our study population

Eur Arch Otorhinolaryngol. 2019 Apr 2.

3. Principles of interventional treatment in epistaxis.

Reißberg S1, Hartmann M2.

Abstract

Epistaxis is a common ear, nose, and throat emergency, but rarely a direct cause for hospital admission. Patients who receive inpatient treatment usually suffer from recurrent posterior epistaxis. Despite otolaryngologic measures such as posterior packing or surgery, bleeding may recur or continue or the source may not be surgically accessible. For these patients, endovascular therapy is a real, sometimes the only, treatment option. In addition to idiopathic causes of posterior epistaxis, the cause may also be symptomatic. In this case, the cause must be identified and treatment adapted accordingly. Pre-embolization CT of the paranasal sinuses and CT-angiography is useful. These methods can reveal the cause and location of the hemorrhage as well as significant vessel variants, anatomic anomalies, or an unsuspected cause of epistaxis. Overall, with a good understanding of the dangerous anastomoses, endovascular therapy for posterior epistaxis has high success rates with a low periprocedural risk

HNO. 2019 May;67(5):360-365

4. Environmental intervention in respiratory disease.

Ardusso LRF1, Neffen HE2, Fernández-Caldas E3, Saranz RJ4, Parisi CAS5, Tolcachier A6, Cicerán A7, Smith S8, Máspero JF9, Nardacchione N10, Marino D11.

Abstract

In recent years there has been a significant increase in the prevalence of allergic diseases despite advances in the understanding of the pathogenesis, the dissemination of guidelines for its management and the emergence of new drugs. The reasons for this increase are not fully established, but it is suggested that multiple environmental factors may be involved. Inhaled air contains numerous harmful agents in addition to environmental allergens. The main immediate respiratory clinical expression after inhaling this contaminated air is asthma and rhinitis. The activity of human beings has altered the outdoor environment by the emission of multiple pollutants and has produced an increasing climate change. It also has a notable impact on the development of respiratory pathology and the modification of air quality. The bibliography on the

subject of environmental control is very broad and sometimes difficult to interpret. In order to be able to make precise, valid and simple indications for patients to accomplish with, four scientific societies of the Argentine Republic that deal with this type of diseases, have elaborated a document that contains information of easy access to all medical personal involved in the treatment of patients with asthma and / or rhinitis, that provides practical measures for the patients and the different public health systems about unmet needs in this complex issue

Medicina (B Aires). 2019;79(2):123-136

5. Conversion to Chronic Invasive Fungal Sinusitis From Allergic Fungal Sinusitis in Immunocompetence.

Edelmayer L1, Ito C2, Lee WS3, Kimbrough J4, Kountakis SE1, Byrd JK1.

Abstract

A review of the treatment of allergic and invasive fungal sinusitis, as well as a presentation of the first recorded case of a conversion from allergic fungal sinusitis (AFS) to chronic granulomatous invasive sinusitis and the fourth case of invasive fungal sinusitis associated with Curvularia. This immunocompetent patient suffering from chronic AFS converted after repeated high-dose steroid tapers and noncompliance. AFS may present atypically and should be suspected even in immunocompetent patients with sinus disease who report new onset pain and neurologic symptoms. Clinicians should consider the potential complications associated with repeated systemic steroid administration

Laryngoscope. 2019 Mar 9

6. Topical corticosteroid irrigations in chronic rhinosinusitis.

Grayson JW1, Harvey RJ1,2.

Abstract

BACKGROUND:

Chronic rhinosinusitis (CRS) has previously been thought to occur secondary to infectious or obstructive etiologies. However, in recent years, primary CRS has been more discretely defined as diffuse airway inflammation, similar to asthma. Adequate medical and surgical therapy are needed to control the inflammation. Our purpose in this study was to evaluate the efficacy and safety of topical corticosteroid treatment.

METHODS:

A focused literature review was conducted and we identified 11 original articles from the years 2013-2018 evaluating safety or efficacy of topical corticosteroid irrigations.

RESULTS:

Eleven articles were identified. One study found significant benefit between corticosteroid irrigations versus corticosteroid sprays. Two studies found significant benefit between corticosteroid irrigations compared to saline irrigations while two did not. One study found significant improvement in certain patient populations when using corticosteroid irrigations compared to no irrigation. Five studies found no significant increase in risk of adverse side effects with the use of topical corticosteroids.

CONCLUSION:

Many factors are associated with efficacious and adequate treatment of primary CRS. The pathology must be correctly diagnosed and be inflammatory in nature. The treatment paradigm should include wide and complete endoscopic sinus surgery for the adequate delivery of topical therapy. Topical therapy should be delivered in large-volume, low-pressure devices with adequate dosing. Although there is some systemic absorption, multiple studies have demonstrated that long-term, daily use of topical corticosteroids does not increase intraocular pressure, suppress the hypothalamic-pituitary-adrenal axis, or increase the risk of subcapsular cataracts. Therefore, topical corticosteroid irrigations should be considered a part of first-line medical treatment in postsurgical CRS patients

Int Forum Allergy Rhinol. 2019 May;9(S1):S9-S15.

7. Efficacy and safety of preoperative internal maxillary arterial embolization with gelfoam for nasopharyngeal angiofibroma.

Pei R1, Yang M1, Wang J1, Tong X1, Wang G2, Zou Y3.

Abstract

PURPOSE:

To investigate the efficacy and safety of preoperative internal maxillary arterial embolization with gelfoam particles in patients with nasopharyngeal angiofibroma.

MATERIALS AND METHODS:

We retrospectively reviewed a total of 27 consecutive patients with pathologically confirmed nasopharyngeal angiofibroma from August 2006 to September 2018. Of the 27 enrolled patients, 10 patients received surgical excision alone; 17 patients received preoperative internal

maxillary arterial embolization followed by surgical excision. Embolic agents were gelfoam particles.

RESULTS:

The mean volume of intro-operative blood loss was 385.3 ml in patients with preoperative arterial embolization, which was significantly lower than 1215.0 ml in the patients without preoperative arterial embolization ($P < 0.001$). The mean surgical time was shorter in patients with preoperative arterial embolization than in the patient without preoperative arterial embolization, but the difference had no statistical significance (205.0 vs 264.5 min, $P = 0.064$). Neurological complications such as facial palsy or vision loss or hemiplegia were not observed in patients with preoperative arterial embolization.

CONCLUSION:

Internal maxillary artery embolization with gelfoam particles suffices to provide an effective and safe adjuvant procedure for surgical excision of nasopharyngeal angiofibroma.

Eur Arch Otorhinolaryngol. 2019 Mar;276(3):865-869.

8. The Management of the Paranasal Sinus Osteomas.

Arslan HH1, Tasli H, Cebeci S, Gerek M.

Abstract

OBJECTIVE:

Osteoma is the most common benign tumor of the paranasal sinuses. The clinical characteristics and treatment of this disease remain controversial. The aim of this study is to determine the appropriate method of treatment approach according to the features of osteomas.

METHODS:

Forty-one patients with paranasal sinus osteomas were included in the study. According to the location and the size of tumors, patients were followed up or operated. Surgical treatment was performed via external, endoscopic, or combined approaches for symptomatic patients. Routine physical and radiological evaluations were performed for follow-up in asymptomatic patients.

RESULTS:

Paranasal sinus osteomas were found most common in frontal sinus (n=26, 63.4%) followed by ethmoid sinus (n=10, 24.3%), maxillary sinus (n=4, 9.7%), and sphenoid sinus (n=1, 2.4%). Of the patients with frontal sinus osteomas, the endoscopic approach was performed in 11

patients, external approach (osteoplastic flap) in 9, and combined (external + endoscopic) approach in 5 patients. Endoscopic approach was preferred in all patients with ethmoid osteoma. The combination of Caldwell-Luc procedure and endoscopic approach was performed in 1 patient with maxillary sinus osteoma. In 3 patients, who underwent osteoplastic flap technique, mucocele developed in the postoperative period. Partial loss of vision developed postoperatively in 1 patient with a giant ethmoid osteoma. There were no other complications and recurrence in an average of 29 months follow-up.

CONCLUSION:

Paranasal sinus osteomas are rare, slow-growing benign lesions, with potentially serious complications. Main treatment option for sphenoid and ethmoid sinus and other symptomatic osteomas are surgical resection. Radiographic follow-up is necessary for asymptomatic lesions. Selection of surgical resection method depends on tumor location and size. Patients should be observed for recurrence with periodic examination and imaging techniques. Follow-up should be performed at least in 1-year intervals after the surgery

J Craniofac Surg. 2017 May;28(3):741-745.

9. Inverted papilloma with multifocal attachment is associated with increased recurrence.

Tong CCL1, Patel NN1, Maina IW1, Triantafillou V1, Yan CH1, Kuan EC1, Kohanski MA1, Papagiannopoulos P1, Workman AD1, Cohen NA1, Kennedy DW1, Adappa ND1, Palmer JN1.

Abstract

BACKGROUND:

Inverted papilloma (IP) is a benign sinonasal tumor with a well-known propensity to recur, especially at its bony attachment site. Anecdotal evidence suggests lower rate of recurrence in primary resection. We also aimed to evaluate the effect of multifocal vs single focus of attachment in disease control.

METHODS:

This work is a retrospective review of 535 IP resections performed during the period from 2006 to 2016 at a tertiary-care center. Demographic data, tumor location and attachment sites, and follow-up duration data were obtained.

RESULTS:

Two hundred ten patients were eligible for analysis. The mean age was 57 years, with an average postoperative surveillance of 36.4 months. Patients who had a previous procedure at an outside institution have a recurrence rate of 22.3%, compared with 12.4% for patients who had primary surgery at our institution. The most common site of attachment was maxillary sinus (47.6%), followed by ethmoid sinus (39%). Individual tumor review showed 50% of the patients to have multifocal attachment disease, of which there is a higher prevalence in secondary cases when compared with primary cases (53.7% vs 44.9%). Multiple tumor attachment sites had a significant effect on recurrence (odds ratio, 3.5; 95% confidence interval, 1.6-7.6; p = 0.002).

CONCLUSION:

Primary resection and single-focus attachment of inverted papilloma are associated with lower recurrence rates at 3-year follow-up

Int Forum Allergy Rhinol. 2019 May 24.

10. Advances in etiology and pathogenic mechanisms of postviral olfactory dysfunction.

Tian J, Wei YX.

Abstract

Postviral olfactory disorders(PVOD) are one of the most commonly identified causes of olfactory dysfunction. However, its causative agent has yet been identified even though techniques of virus detection have been improved rapidly. It has been reported that some kinds of viruses are able to infect the olfactory neurons directly and result in the infection of central nervous system via olfactory pathway, which suggest the complexity of the pathogenic mechanism of PVOD. In the article, we review the advance in virus identification and pathogenesis of PVOD, which might be helpful to the diagnosis and treatment

Lin Chung Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2019 May;33(5):477-480.