Pan Arab Rhinology Society
PARS Reader's Digest

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

1. Management of congenital choanal atresia (CCA) after multiple failures: A Case Report.

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Abstract

Nasal obstruction in neonates is a potentially fatal condition because neonates are obligatory nasal breathers. Bilateral choanal atresia is therefore a neonatal emergency. Several approaches for corrections of choanal atresia are available including the helium laser: YAG. A 5-year-old Chinese girl born with bilateral choanal atresia, had birth asphyxia that required intubation. She underwent multiple surgeries for correction of choanal atresia at other hospitals but failed to improve. She was referred to Universiti Kebangsaan Malaysia Medical Center (UKMMC) after presenting with intermittent respiratory distress and cyanosis following an upper respiratory tract infection. A repeat computed tomography (CT) scan done preoperatively showed complete bony stenosis over the left choana and finding was confirmed by examination under general anesthesia. She underwent endoscopic transnasal removal of left bony atretic plate. There was no intra or postoperative complications. During follow up 10 years later, the airway on both sides remains patent.

Med J Malaysia. 2013 Feb;68(1):76-8

2. Endoscopic management of posterior epistaxis.

Paul J, Kanotra SP, Kanotra S

Abstract

The traditional method of management of posterior epistaxis has been with anteroposterior nasal packing. Apart from the high failure rate of 26-50% reported in various series, nasal packing is associated with marked discomfort and several complications. In order to avoid nasal packing, we started doing endoscopic

cauterization in cases of posterior epistaxis. A total of 23 patients with posterior epistaxis were subjected to nasal endoscopy with the intent to stop bleeding by cauterization of the bleeding vessel. Of these, in four cases unsuspected diagnosis was made. Of the remaining 19, in three patients, the bleeding point could not be localized accurately and these patients were managed by anteroposterior packing. The rest of the 16 patients were managed by endoscopic cauterization. In four patients, there was recurrence of bleeding within 24 h. In one of these, cauterization controlled the bleeding while in the rest nasal packing had to be resorted to. Thus, of the 23 patients of posterior epistaxis subjected to nasal endoscopy, we could avoid nasal packing in 17 (74%). To conclude, endoscopic nasal cauterization is recommended as the first line to treatment in all cases of posterior epistaxis. This will not only prevent the uncomfortable and potentially dangerous nasal packing but also help in finding the underlying pathology.

Indian J Otolaryngol Head Neck Surg. 2011 Apr;63(2):141-4

3. Comparison of the effect of endoscopic sinus surgery versus medical therapy on olfaction in nasal polyposis.

Baradaranfar MH, Ahmadi ZS, Dadgarnia MH, Bemanian MH, Atighechi S, Karimi G, Halvani A, Behniafard N, Baradaranfar A, Meybodi TE.
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Abstract

Chronic rhinosinusitis is a common inflammatory condition in western countries. Nasal polyposis has different symptoms such as nasal obstruction, anterior or posterior nasal drip, reduced sense of smell, and facial pain. Medical and endoscopic treatments are the two main treatments for nasal polyposis. Our aim was to compare the efficacy of different methods on olfactory function. This is a non-randomized clinical trial study that was done on 60 patients who were divided into two groups (medical and surgical). Patients were matched based on age, history of smoking, and the severity of obstruction. The radiologist score of Lund-Mackay staging system was used to match patients in two arms of the trial based on the severity of nasal obstruction. Patients in surgery groups underwent functional endoscopic sinus surgery under general anesthesia and then received Fluticasone propionate nasal spray for 8 weeks (400 mcg bd). Patients in the medical group were only prescribed with Fluticasone propionate with the same duration and same dose as mentioned. As a result of treatment protocol, both medical and surgical group experienced improvement in olfactory function but statistical analyses revealed that surgery resulted in better resolution of symptoms. Our

observation revealed that combined treatment had a better effect than medical treatment in restoring olfaction in patients with nasal polyposis.

Eur Arch Otorhinolaryngol. 2013 May 23.

4. Role of Staphylococcal Superantigens in Airway Disease.

Huvenne W, Hellings PW, Bachert C.
Upper Airways Research Laboratory, Department of Otorhinolaryngology - Head and Neck Surgery, Ghent University Hospital, Ghent, Belgium.

Abstract

Staphylococcus aureus is a common human pathogen, which is regularly part of the normal microflora found in the nose and skin. It represents a significant threat to human health, not in the least because of its capability to produce exotoxins, which have superantigenic properties. These exotoxins, in particular the staphylococcal enterotoxins (SEs), are known to be involved in the modulation and aggravation of airway inflammation. Indeed, recent studies show an important impact of SEs on the natural course of allergic rhinitis, nasal polyposis, asthma and COPD. This review outlines the current knowledge on the influence of SEs on airway inflammation. We highlight, in particular, the recent evidence on their role in asthma.

Int Arch Allergy Immunol. 2013 May 14;161(4):304-314.

5. Chronic sinusitis pathophysiology: The role of allergy.

Kennedy JL, Borish L

Abstract

BACKGROUND: Chronic hyperplastic eosinophilic sinusitis (CHES) is an inflammatory disease characterized by eosinophil infiltration of sinus tissue that can present with and without nasal polyps (NPs). Aeroallergen sensitization in CHES occurs regularly, but the causality between allergen sensitivity, exposure,and disease is unclear.

METHODS:

Allergen is unlikely to directly enter healthy sinuses either by diffusion or ciliary flow, and, even this is more problematic given the loss of patencyof the ostia of diseased sinuses. Inflammation and tissue eosinophilia can develop secondary to allergen exposure in the nares, with systemic humoral recirculation of allergic cells including

eosinophils, Th2 lymphocytes, and eosinophil precursors that are nonspecifically recruited back to the diseased sinuses.

RESULTS:

The possibility of an allergic reaction to peptides derived from bacteria (i.e., Staphylococcus or superantigens) or fungi that colonize the diseased sinus also provides a plausible allergic mechanism.

CONCLUSION:

Treatments of this disease include agents directed at allergic mediators such as leukotriene modifiers and corticosteroids, although this does not necessarily signify that an IgE-dependent mechanism can be ascribed. However, more recently, omalizumab has shown promise, including in patients without obvious aeroallergen sensitization. Although many aspects of the role of allergy in CHES remain a mystery, the mechanisms that are being elucidated allow for improved understanding of this disease, which ultimately will lead to better treatments for our patients who live daily with this disease.

Am J Rhinol Allergy. 2013 Apr 18.

6. The natural history and clinical characteristics of paranasal sinus mucoceles: a clinical review.

Scangas GA, Gudis DA, Kennedy DW.
Department of Otorhinolaryngology-Head and Neck Surgery, Hospital of the University of Pennsylvania, Philadelphia, PA.

Abstract

BACKGROUND:

A retrospective data analysis at a university tertiary referral center was conducted to characterize the natural history, clinical characteristics, management principles, and outcomes of paranasal sinus mucoceles.

METHODS:

A chart review was performed on 102 patients with a total of 133 paranasal sinus mucoceles who were treated between 1987 and 2011 at the Hospital of the University of Pennsylvania.

RESULTS:

The study population included patients with a mean age of 53.1 years (range, 22-82 years). Patients were diagnosed with a mucocele on average 5.3 years following prior functional endoscopic sinus surgery (FESS), 17.7 years following prior paranasal sinus trauma, and 18.1 years following prior open sinus surgery. The most common presenting symptoms were headache (42.1%) and maxillofacial pressure (28.6%). The most common sites were the frontal, frontoethmoidal, and ethmoid sinuses. Fifty-seven mucoceles (44.9%) had intraorbital extension, intracranial extension, or both. Out of 133 mucoceles, 114 underwent ESS without complication.

CONCLUSION:

The length of time between prior surgery or trauma and mucocele presentation highlights the importance of long-term follow-up in both patient care and in the understanding and reporting of surgical outcomes. In this study, most patients exhibited nonspecific symptomatology despite extensive mucoceles and a significant incidence of orbital and skull-base erosion. The endoscopic approach can be safely used for the management of such lesions.

Int Forum Allergy Rhinol. 2013 May 20

7. Transnasal approach to the orbital apex and cavernous sinus.

Felippu A, Mora R, Guastini L, Peretti G.
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Abstract

OBJECTIVES:

The aim of this study was to provide the anatomic rationale for a transnasal approach to the orbital apex and cavernous sinus, and to evaluate its applicability and efficiency.

METHODS:

One hundred patients with lesions of the orbital apex, cavernous sinus, optic nerve, clivus, parapharyngeal space, infratemporal fossa, or pterygopalatine fossa were reviewed over a 10-year period. All patients underwent an endoscopic transnasal approach to the orbital apex and cavernous sinus. The surgical technique required a standard endoscopic sinus surgery set. The possible complications were recorded and classified as intraoperative or postoperative.

RESULTS:

There were complications in 8 cases: 4 intraoperative and 4 postoperative. The intraoperative complications included rupture of the internal carotid artery in 1 patient and cerebrospinal fluid leak in 3 patients. All intraoperative complications were resolved during surgery. The postoperative complications were transitory eyelid ptosis in 2 patients (resolved in 6 months) and transitory diplopia with immediate deficit of the medial rectus muscle in 2 patients (completely resolved in 1 month).

CONCLUSIONS:

With the use of this technique, the surgeon can precisely identify the position of the surgical instrument without losing his or her way, thereby significantly reducing the rate of complications.

Ann Otol Rhinol Laryngol. 2013 Apr;122(4):254-62

8. Endoscopic transnasal management of inverted papilloma involving frontal sinuses.

Gotlib T, Krzeski A, Held-Ziółkowska M, Niemczyk K.
Department of Otolaryngology, Medical University of Warsaw, Poland

Abstract

Inverted papilloma is a benign locally aggressive tumor of paranasal sinuses which has been traditionally managed with external surgical approaches. Advances in tumor imaging, surgical instrumentation and intraoperative visualization have led to a gradual shift to endonasal attachment-oriented surgery. Involvement of both frontal sinuses by inverted papilloma is rare. There are scant reports in the literature regarding this topic. We present 2 cases of the tumor involving both frontal sinuses removed by median drainage (Draf III procedure) under endoscopic guidance without any additional external approach. The whole cavity of both frontal sinuses was easily inspected at the end of the procedure. No early or late complications were observed. No recurrence was seen in 1-year or 2-year follow-up. Management of frontal sinus inverted papilloma with the endoscopic median drainage approach is feasible and seems to be effective.

Wideochir Inne Tech Malo Inwazyjne. 2012 Dec;7(4):299-303.

9. Non-Hodgkin's lymphoma of maxillary sinus: An unusual presentation.

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Department of Oral and Maxillofacial Surgery, VYWS Dental College and Hospital, Maharashtra, India

Abstract

Non-Hodgkin's Lymphoma (NHL) are a group of neoplasms that originate from the cells of the lymphoreticular system. Forty percent of Non-Hodgkin's lymphoma arises from extranodal sites. The nasal cavities and paranasal sinuses are rarely affected by primary NHL. Common primary extranodal sites of lymphomas include stomach, liver, soft tissue, dura, bone, intestine and bone marrow. Most patients present with rapidly enlarging masses, often with symptoms both locally and systemically (fever, recurrent night sweats, or weight loss). The vast majority of patients with localized disease are curable with combined modality therapy or combination chemotherapy alone. About 50% patients are cured with doxorubicin based combination chemotherapy and rituximab. An atypical case of extranodal Non-Hodgkin's lymphoma of maxillary sinus is discussed.

Ann Maxillofac Surg. 2013 Jan;3(1):95-7.

10. Smoking and malignancy in sinonasal inverted papilloma.

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Abstract

OBJECTIVES/HYPOTHESIS:

The authors investigated clinical features of squamous cell carcinomas (SCC) arising in sinonasal inverted papillomas (IP) and risk factors responsible for their malignant transformation.

STUDY DESIGN:

Retrospective analysis.

METHODS:

In total, 162 patients diagnosed with sinonasal IP and treated between 1998 and 2009 at Pusan National University Hospital were enrolled. Their demographic data, information about previous surgery, smoking history, treatment modalities, follow-up duration, recurrence, and presence of malignancy were reviewed retrospectively.

RESULTS:

Seventeen patients (10.5%) were diagnosed with SCC arising in sinonasal IPs. Among them, nine (9/162, 5.6%; 9/17, 52.9%) were diagnosed with synchronous malignancies and three (3/162, 1.8%; 3/17, 17.6%) were diagnosed with metachronous malignancies. In five cases (5/162, 3.1%; 5/17, 29.4%), we could not determine whether their malignancies were synchronous or metachronous. Among 53 smokers, 14 (26.4%) had malignant transformation, while only three (2.8%) in 109 nonsmokers had malignant transformation (Odds ratio = 12.7; $P < .001$). The mean follow-up in the 17 patients with malignancy was 47.0 months. Three patients did not receive surgical treatment and died of progression of SCC. Among the other 14 patients who underwent curative surgeries, four (28.6%) had recurrences, and their mean period to cancer recurrence was 6.3 months. Two of them died of progression of the cancer. Mean survival of the five patients who died was 14.0 months. They all belonged to T4 stage.

CONCLUSIONS:

Smoking history is associated with malignant transformation of sinonasal IP. It suggests that close follow-up be required in smokers with sinonasal IP in order not to overlook the malignant transformation.

Laryngoscope. 2013 May;123(5):1087-91