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

1. Diagnostic Imaging Features of Congenital Nose and Nasal Cavity Lesions.

Ginat DT, Robson CD.
Department of Radiology, University of Chicago, 5841S Maryland Avenue, Chicago, IL 60637, USA, ginatd01@gmail.com.

Abstract

A wide variety of congenital nasal lesions can present to clinical attention due to airway obstruction, the presence of a mass, and/or cosmetic deformity, including pyriform aperture stenosis, choanal atresia, nasopharyngeal atresia, arrhinia, congenital germline fusion cysts, cephaloceles, neuroglial heterotopia, nasolacrimal duct mucoceles, hamartomas, supernumerary nostril, and bifid nose. Computed tomography and magnetic resonance imaging, which are the main imaging modalities used to characterize these lesions, often serve complementary roles. Familiarity with embryology and anatomy is also essential for recognizing the diagnostic imaging findings related to congenital nasal lesions.

ClinNeuroradiol. 2014 Aug 6

2. Diseases of the nose and paranasal sinuses in child.

Stenner M1, Rudack C1.

Abstract

Diseases of the pediatric nose and nasal sinuses as well as neighboring anatomical structures encompass a variety of pathologies, especially of inflammatory nature. Congenital disease, such as malformations and structural deviations of the nasal septum, as well as systemic metabolic pathologies affecting the nose and sinuses, rarely require medical therapy from an Otolaryngologist. The immunological function of the mucosa and genetic factors play a role in the development of disease in the pediatric upper airway tract, especially due to the constantly changing anatomy in this growth phase. Disease description of the nose and nasal sinuses due to mid-facial growth must also take developmental age differences (infant, toddler, preschool, and school age) into account. Epidemiological examinations and evidence based studies are often lacking in the pediatric population. The wide range of inflammatory diseases of the nose and paranasal sinuses, such as the acute and chronic rhinosinusitis, the allergic rhinitis, and adenoid disease, play a role in the susceptibility of a child to infection. The susceptibility to infection depends on the pediatric age structure (infant, young child) and has yet to be well defined. The acute rhinosinusitis in children develops after a viral infection of the upper airways, also referred medical therapy. Antibiotic therapy is prudent in complicated episodes of ARS. The antibiotic therapy is reserved for children with complications or associated disease, such as bronchial asthma and/or chronic bronchitis. A chronic rhinosinusitis is defined as the inflammatory change in the nasal mucosa and nasal sinus mucosa, in which the corresponding symptoms persist for over 12 weeks. The indication for CT-imaging of the

nasal sinuses is reserved for cases of chronic rhinosinusitis that have been successfully treated with medication. A staged therapeutic concept is followed in CRS based on conservative and surgical methods. Nasal sinus surgery is considered nowadays as effective and safe in children. Based on the assumption that adenoids are a reservoir for bacteria, from which recurrent infections of the nose and nasal sinus originate, the adenoidectomy is still defined as a cleansing procedure in rhinosinusitis. 69.3% of the children had benefit from adenoidectomy. Comorbidities, such as pediatric bronchial asthma, presently play an even more important role in the therapy of rhinosinusitis; therefore, it is often wise to have the support of pediatricians. In western European countries 40% of children presently suffer from allergic rhinitis, in which pronounced nasal obstruction can cause disturbed growth in facial bones. An early therapy with SIT may prevent the development of bronchial asthma and secondary sensitization to other allergens. Therefore, SIT is recommended in treatment of allergic rhinitis whenever, if possible. The assessment of diagnostic tools is for the examiner not often possible due to the lack of evidence. Rhinosurgical approaches are often described in study reports; however, they lack the standard prospective randomized long-term study design required nowadays and can only be evaluated with caution in the literature.

GMS Curr Top Otorhinolaryngol Head Neck Surg. 2014 Dec 1;13:Doc10

3. Epistaxis in geriatric patients.

Yüksel A, Kurtaran H, Kankiliç ES, Ark N, Uğur KS, Gündüz M.

Abstract

AIM:

Epistaxis is a common emergency in otolaryngology. The aim of this study is to analyze the etiology, management, and accompanying disorders of epistaxis in geriatric patients by reviewing the literature

MATERIALS AND METHODS:

There were 67 women (57.26%) and 50 men (42.74%) with a mean age of 73.51 years (range: 65-90). Ninety-four (80.34%) patients had accompanying disorders such as hypertension, diabetes mellitus, cerebrovascular disease, sinusitis, chronic obstructive lung disease, nasal polyp, and drug treatment. The bleeding site was anterior in 90 patients (76.92%) and posterior in 16 (13.67%). In 11 patients (9.4%), the bleeding site was not identified. Fifty-seven patients (48.71%) were treated with cauterization, 17 patients (14.52%) with nasal packing, 12 patients (10.25%) with medical treatment, 1 patient (0.85%) with mass excision and nasal packing, and 19 patients (16.23%) with more than 1 treatment method. Six patients (5.12%) were untreated because of the unidentified bleeding point. Bleeding control was performed under local anesthesia in 113 patients (96.58%) and under general anesthesia in 4 patients (3.41%). Twenty-one patients (17.94%) were hospitalized and 3 patients (2.56%) required a blood transfusion.

CONCLUSION:

Epistaxis is the most common otorhinolaryngological emergency. It must be evaluated carefully to avoid the potential complications resulting from both epistaxis and its associated disorders, especially in geriatric patients.

Turk J Med Sci. 2014; 44(1):133-6.

4. Air pollution and emergency department visits for epistaxis.

Szyszkowicz M, Shutt R, Kousha T, Rowe BH.

Abstract

OBJECTIVES:

This study aimed to evaluate the association between outdoor ambient air pollution and emergency department (ED) visits for epistaxis.

DESIGN:

Cross-sectional study, case-crossover design.

SETTING:

ED visit data were obtained for Edmonton, Alberta, Canada, for a period of 10 years starting 1 April 1992 and ending March 31st of 2002. The data on ED visits were supplied by Capital Health for the five major acute care hospitals in the Edmonton area.

PARTICIPANTS:

The analysis was performed for the population as a whole (N = 15 038) and split by sex: males (N = 8587) and females (N = 6451).

MAIN OUTCOME MEASURES:

We explored associations between ambient concentrations of air pollutants (CO, NO2, SO2, O3, PM10, PM2.5) lagged by 0-4 days and ED visits for epistaxis in Edmonton, Alberta, Canada.

RESULTS:

Odds ratios (ORs) and their 95% confidence intervals (CI) were reported for an increase in an interquartile range (IQR) of pollutant concentration. We obtained positive and statistically significant results for all patients with epistaxis; exposure to O3 with IQR = 14 ppb, OR = 1.05 (95% CI: 1.00-1.09, lag 0), and for males (age < 25 years), OR = 1.16 (1.03-1.30), lag 4; and to PM10 with IQR = 15 μg/m(3) , OR = 1.02 (1.00-1.05, lag 3). These results were stronger for older (age > 24 years) females.

CONCLUSIONS:

These findings suggest that there may be an association between air pollutant exposure, specifically ozone and PM10, and the number of ED visits for epistaxis.

ClinOtolaryngol. 2014 Dec; 39(6):345-51

5. **Middle-ear pain and trauma during air travel.**

Wright T1.

Abstract

INTRODUCTION:

Changes in air pressure during flying can cause ear-drum pain and perforation, vertigo, and hearing loss. It has been estimated that 10% of adults and 22% of children might have changes to the ear drum after a flight, although perforation is rare. Symptoms usually resolve spontaneously.

METHODS AND OUTCOMES:

We conducted a systematic review and aimed to answer the following clinical question: What are the effects of interventions to prevent middle-ear pain during air travel? We searched: Medline, Embase, The Cochrane Library and other important databases up to July 2014 (Clinical Evidence reviews are updated periodically; please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).

RESULTS:

We found three studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.

CONCLUSIONS:

In this systematic review we present information relating to the effectiveness and safety of the following interventions: nasal balloon inflation, nasal decongestants (topical), and oral pseudoephedrine.

ClinEvid (Online). 2015 Jan 19; 2015

6. Rhinitis in children: common clinical presentations and differential diagnoses.

Rotiroti G, Roberts GC, Scadding G.

Abstract

Rhinitis is a common presentation in childhood. Acute virally- induced rhinitis is generally self-limiting and usually does not require medical attention. Whilst allergic rhinitis is the focus of the paediatric allergist, the presentation of other diseases or co-morbidities that can complicate or mimic allergic rhinitis need to be considered. Effects on the child's quality of life also need to be addressed. Rhinitis can be associated with asthma and other significant co-morbidities: importantly, non-allergic rhinitis can sometimes be a consequence of systemic immune-impairment. The diagnosis of rhinitis is based on clinical findings with directed investigations. Nasal nitric oxide measurement is an emerging diagnostic tool and helpful particularly in relation to evaluating the differential diagnosis in more difficult rhinitis. Successfully identifying the cause of rhinitis in childhood and associated co-morbidities can ensure that the patient is successfully treated as described in the recently published EAACI Pediatric Rhinitis Position Paper. This article is protected by copyright. All rights reserved

Pediatr Allergy Immunol. 2015 Jan 23

7. Novel treatment of allergic fungal sinusitis using omalizumab.

Evans MO, Coop CA.

Abstract

A case report of recalcitrant allergic fungal sinusitis (AFS) refractory to systemic corticosteroids and multiple functional endoscopic sinus surgeries (FESSs) treated with anti-IgE antibody omalizumab is reported. AFS is often classified with chronic rhinosinusitis (CRS). Although similar symptoms are among the two diseases, AFS has a unique pathophysiology. Patients with AFS demonstrate type 1 hypersensitivity to fungal allergens, increased total serum IgE, increased CD8 (+) T-cell prevalence, and IL-4 and IL-5 response. Omalizumab should be considered in the treatment of AFS.

Allergy Rhinol (Providence). 2014 Jan; 5(3):172-4

8. Image-guided sphenoidotomy in revision functional endoscopic sinus surgery.

Jiang RS, Liang KL.

Abstract

The application of image-guided systems to sinus surgery is gaining in popularity. This study tried to evaluate the efficacy of image-guided surgery (IGS) in the fenestration of the sphenoid sinus in patients with chronic rhinosinusitis (CRS) who received revision functional endoscopic sinus surgery (FESS). A total of 51 CRS patients who received revision FESS incorporating IGS between January 2010 and August 2011 by two surgeons were enrolled in this study. A group of 30 CRS patients who underwent revision FESS by the senior surgeon without incorporating IGS was chosen for comparison. The penetration rates for the sphenoid sinus were 91.2% when performed by the senior surgeon with IGS and 91.3% when done by the other surgeon with IGS. The penetration rate for the sphenoid sinus was 68.6%

for revision FESS without IGS. The fenestration rate for the sphenoid sinus in revision FESS without IGS was significantly lower than that in revision FESS with IGS (p = .004). Our results showed that IGS was a beneficial procedure for opening the sphenoid sinus in the revision cases

Allergy Rhinol (Providence). 2014 Jan; 5(3):116-9.

9. **Endoscopic endonasal approaches to infratemporal fossa tumors: a classification system and case series.**

Taylor RJ1, Patel MR, Wheless SA, McKinney KA, Stadler ME, Sasaki-Adams D, Ewend MG, Germanwala AV, Zanation AM.

Abstract

OBJECTIVES/HYPOTHESIS:

To propose a clinically applicable anatomic classification system describing three progressive endoscopic endonasal approaches (EEAs) to the infratemporal fossa (ITF) and their potential sequelae. Overall feasibility and outcomes of these approaches are presented through a consecutive case series.

STUDY DESIGN:

Description of classification system for EEAs to the ITF and case series.

METHODS:

A classification system of EEAs to ITF tumors was created based on the senior author's clinical experience and cadaveric dissection. A retrospective chart review of 21 child and adult patients with primary ITF tumors treated by these approaches from 2008 to 2012 at a tertiary-care academic medical center was conducted.

RESULTS:

Three progressive EEAs to ITF tumors were defined: 1) a transpterygopalatine fossa approach, 2) a transmedialpterygoid plate approach, and 3) a translateralpterygoid plate approach. Twenty-one patients treated with these approaches were identified consecutively, with a mean age of 44.2 years (range, 11-79 years). Tumors primarily involving the pterygopalatine fossa and not the ITF were excluded. Pathology included three advanced juvenile nasopharyngeal angiofibromas, three adenoid cystic carcinomas, two recurrent inverted papillomas, two trigeminal schwannomas, and 11 other diverse skull base pathologies. No intraoperative or postoperative complications occurred, with a mean follow-up of 21.5 months (range, 1-55 months). Expected potential sequelae such as V2/palatal numbness, Eustachian tube dysfunction, and trismus occurred in 10/21 patients.

CONCLUSIONS:

EEAs to ITF tumors are technically feasible with low risk of complications for well-selected patients. The proposed classification system is useful for anticipating potential sequelae for each approach

Laryngoscope. 2014 Nov; 124 (11):2443-50

10. Microsurgical and Endoscopic Anatomy of the Extended Retrosigmoid Inframeatal Infratemporal Approach.

Colasanti R1, Abbasali Tailor AR, Gorjian M, Zhang J, Ammirati M.

Abstract

BACKGROUND:

Different and often complex routes are available to deal with jugular foramen tumors with extracranial extension.

OBJECTIVE:

To describe a novel extension of the retrosigmoid approach useful to expose the extracranial area abutting the posterior fossa skull base.

METHODS::

A navigation-guided, endoscope-assisted retrosigmoidinframeatal approach was performed on 6 cadaveric heads in the semisitting position, displaying an area from the internal acoustic meatus to the lower cranial nerves and exposing the intrapetrous internal carotid artery. We then continued removing the temporal bone located between the sigmoid sinus and the hearing apparatus, reaching the infratemporal area just lateral to the jugular fossa. This drilling, which we refer to as posterolateral inframeatal drilling, has not previously been described. Drilling of the horizontal segment of the occipital squama allowed good visualization of the uppermost cervical internal carotid artery, internal jugular vein, and lower extracranial cranial nerves.

RESULTS:

We were able to provide excellent exposure of the inframeatal area and of the posterior infratemporal fossa from different operative angles, preserving the neurovascular structures and the labyrinth in all specimens. The intradural operative window on the extracranial compartment was limited by the venous sinuses and the hearing apparatus and presented a mean width of 8.52 mm. Sigmoid sinus transection led to better visualization of the lateral half of the jugular foramen and of the uppermost cervical internal carotid artery.

CONCLUSION:

The navigation-guided endoscope-assisted extended retrosigmoid inframeatalinfra temporal approach provides an efficient and versatile route for resection of jugular foramen tumors with extracranial extension

Neurosurgery. 2015 Jan 16