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

1. Nasal polyposis in children.

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Abstract

Nasal polyposis is a chronic inflammatory disease affecting the nasal cavity and the paranasal sinuses. It is a relatively common disease, occurring in 1-4 % of the general population, but it is rarely described in the pediatric population. Most of the published series include children presenting with other underlying systemic diseases, mainly cystic fibrosis. The aim of the present study was to describe the characteristics of the patients suffering from nasal polyposis, evaluated at the Pediatric Clinic of the University of Pavia (Italy) over the last 17 years. 56 consecutive pediatric patients referring to our Pediatric Department had a diagnosis of nasal poyposis over the last 17 years. All children underwent allergy evaluation, nasal endoscopy, CT scan of the paranasal sinus, and Functional Endoscopic Sinus Surgery. The mean age of the present cohort was of 11.8 years and most of the patients were male. 50% of the patients presented with unilateral, polyposis, mostly with a diagnosis of antrochoanal polyp. 4 patients presenting with bilateral polyposis suffered from cystic fibrosis. Main symptoms at diagnosis included nasal obstruction, snoring and rhinorrhea 32% of the patients presented at least a positivity to skin prick test, for major inhalant and food allergens. Nasal polyposis in children could represent an alert sign for other underlying systemic diseases. Nasal endoscopy should therefore be prescribed when a diagnosis is suspected. To properly treat a patient presenting with nasal polyposis, it is necessary to integrate medical and surgical skills through a multidisciplinary approach.

J Biol Regul Homeost Agents. 2012 Jan-Mar;26(1 Suppl):S77-83

2. Endoscopic endonasal management of congenital intranasal meningocele in a 2-month-old infant.

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Abstract

INTRODUCTION:

Nasal meningocele, which is usually congenital, is a rare anomaly resulting from meningeal herniation into the nasal cavities through a bone defect in the skull base.

CASE REPORT:

An 8-day-old boy was referred with respiratory disturbance and nasal obstruction. Examination showed a cyst-like grayish swelling filling the right nasal cavity. CT scan showed opacity, of fluid-like density, filling the right nasal fossa, in contact with a small bony defect in the right cribriform plate. MRI ruled out herniated brain parenchyma and enabled diagnosis of meningocele. The patient was operated on at the age of 2months through a transnasal endoscopic approach. Immediate postoperative course was favorable. MRI control at 8months was normal.

DISCUSSION:

Modern imaging (CT scan and MRI) is of paramount importance in the preoperative evaluation of nasal meningocele. Endoscopic endonasal (EE) surgery is currently the treatment of choice.

CONCLUSION:

Steady progress in instrumentation, technique and skills will increase the feasibility of skull-base surgery using an endonasal approach in the pediatric population.

Eur Ann Otorhinolaryngol Head Neck Dis. 2013 May 17. pii: S1879-7296(13)00051-3.

3. Comparison of pediatric and adult nasal fractures.

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Abstract

Nasal fractures are the most common facial fracture in children and adults. Generally, it is believed that reduction of pediatric nasal fracture is more difficult and should be performed earlier compared with that of adult nasal fracture. However, there has been no article to prove this theory. We investigated 423 patients with acute nasal fractures

requiring surgery and divided them into the following 2 groups: patients 12 years and younger (pediatric group) and patients 13 years and older (adult group). We then compared these patients in various aspects. There were no significant differences in the cause of fracture or postoperative conditions. Only the type of fracture and the anesthesia were different between these 2 groups. In the pediatric group, the interval between injury and surgery was arbitrarily divided into 2 groups, but there was no significant difference between these groups in the postoperative conditions. Some reports recommended that pediatric nasal fractures should be reduced within 3 to 5 days, but it cannot be proven. In conclusion, it is not necessary to distinguish treatment of pediatric nasal fracture from that of adult nasal fracture.

J Craniofac Surg. 2012 Sep;23(5):1364-6

4. Adenoidal hypertrophy and allergic rhinitis: is there an inverse relationship?

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Abstract

BACKGROUND:

Nasal obstruction is a very common symptom in children. The main causes are allergic rhinitis (AR) and adenoidal hypertrophy (AH); the possible correlation between AR and AH has been investigated by few studies, mainly conducted using radiographic craniometry. This study aimed at investigating this topic by nasal endoscopy.

METHODS:

There were 205 children (134 boys; mean age, 6.7 years age range, 4-12 years) studied. Clinical visit, nasal endoscopy, and skin-prick test were performed in all patients. Anterior nasal obstruction was graded using the Friedmann's classification. Adenoid size was graded using the Parikh's classification. Perception of symptoms by children was also assessed using the visual analog scale.

RESULTS:

Ninety-two children (44.9%) had complete nasal obstruction and 28 children (13.7%) had choanae invasion. There was a negative significant correlation ($r = -0.41$; $p < 0.001$) between nose obstruction severity and volume of adenoids. Decreased probability of greater adenoid volume was associated with increased severity of nose obstruction

(odds ratio [OR] = 0.13) and in patients with allergy compared with nonallergic patients (OR = 0.31).

CONCLUSION:

This real-life study shows that large adenoids may be associated with absence of allergy, whereas large turbinates may be associated with small adenoids.

Am J Rhinol Allergy. 2013 Jan;27(1):e5-10.

5. Signs and Symptoms that Differentiate Acute Sinusitis from Viral Upper Respiratory Tract Infection.

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Abstract

OBJECTIVE:: Differentiating acute bacterial sinusitis from viral upper respiratory tract infection (URI) is challenging; 20% to 40% of children diagnosed with acute sinusitis based on clinical criteria likely have an uncomplicated URI. The objective of this study was to determine which signs and symptoms could be used to identify the subgroup of children who meet current clinical criteria for sinusitis but who nevertheless have a viral URI. METHODS:: We obtained sinus radiographs in consecutive children meeting a priori clinical criteria for acute sinusitis. We considered the subgroup of children with completely normal sinus radiographs to have an uncomplicated URI despite meeting the clinical diagnostic criteria for sinusitis. We examined the utility of signs and symptoms in identifying children with URI. RESULTS:: Of 258 children enrolled, 54 (20.9%) children had completely normal radiographs. The absence of green nasal discharge, the absence of disturbed sleep, and mild symptoms were associated with a diagnosis of URI. No physical exam findings were particularly helpful in distinguishing between children with normal vs. abnormal radiographs. CONCLUSIONS:: Among children meeting current criteria for the diagnosis of acute sinusitis, those with mild symptoms are significantly more likely to have a URI than those with severe symptoms. In addition to assessing overall severity of symptoms, practitioners should ask about sleep disturbance and green nasal discharge when assessing children with suspected sinusitis; their absence favors a. diagnosis of URI.

Pediatr Infect Dis J. 2013 May 20

6. Allergic fungal sinusitis in children

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Abstract

Allergic fungal sinusitis (AFS) is a subtype of eosinophilic chronic rhinosinusitis (CRS) characterized by type I hypersensitivity, nasal polyposis, characteristic computed tomography scan findings, eosinophilic mucus, and the presence of fungus on surgical specimens without evidence of tissue invasion. This refractory subtype of CRS is of the great interest in the pediatric population, given the relatively early age of onset and the difficulty in managing AFS through commercially available medical regimens. Almost universally, a diagnosis of AFS requires operative intervention. Postoperative adjuvant medical therapy is a mainstay in the treatment paradigm of pediatric AFS.

Otolaryngol Clin North Am. 2012 Jun;45(3):631-42, viii.

7. Immunotherapy in allergic fungal sinusitis: The controversy continues. A recent review of literature.

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Abstract

Allergic fungal sinusitis (AFS), also referred to as allergic fungal rhinosinusitis (AFRS), is a noninvasive, eosinophilic form of recurrent chronic allergic hypertrophic rhinosinusitis. AFS has distinct clinical, histopathological, and prognostic findings that differentiate it from other forms of sinusitis. The core pathogenesis and optimum treatment strategies remain debated. Concerns surround the use of immunotherapy for AFS because allergen-specific immunoglobulin G (IgG) induced by immunotherapy could theoretically incite a Gell and Coombs type III (complex mediated) reaction. Type I hypersensitivity is established by high serum levels of allergen-specific IgE to various fungal antigens and positive Bipolaris skin test results. Type III hypersensitivity is established by an IgG-mediated process defined by the presence of allergen-specific IgG that forms complexes with fungal antigen inducing an immunologic inflammatory response. These reveal the multiple immunologic pathways through which AFS can impact host responses. Recent literature establishing benefits of fungal immunotherapy and no evidence of type III-mediated reactions, severe local reactions, or delayed reactions, indicate that

application of AFS desensitization is a reasonable therapeutic strategy for this difficult to manage entity. Our review should encourage further clinical acceptance of AFS desensitization because the existing literature on this subject shows benefits of fungal immunotherapy and no evidence of type III-mediated reactions, severe local reactions, or delayed reactions.

Allergy Rhinol (Providence). 2013 Spring;4(1):e32-5.

8. 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

9. Juvenile nasopharyngeal angiofibroma: a systematic review and comparison of endoscopic, endoscopic-assisted, and open resection in 1047 cases.

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Abstract

OBJECTIVES/HYPOTHESIS:

This study is a review of the treatment outcomes of juvenile nasopharyngeal angiofibroma (JNA) specifically comparing endoscopic, endoscopic-assisted, and open surgical approaches.

STUDY DESIGN:

Systematic review of studies using the MEDLINE database.

METHODS:

A systematic review of studies on JNA from 1990 to 2012 was conducted. A search for articles related to JNA, along with bibliographies of those articles, was performed. Articles were examined for individual patient data (IPD) and aggregate patient data

(APD). Demographics, presenting symptoms, surgical approach, follow-up, and outcome were analyzed.

RESULTS:

Eighty-five articles were included, with IPD reported in 57 articles (345 cases) and APD in 28 articles (702 cases). For the IPD cohort, average follow-up was 33.4 months (range, 0.5-264 months). Average blood loss was 544.0 mL, 490.0 mL, and 1579.5 mL for endoscopic, endoscopic-assisted, and open surgical cases, respectively ($P < .05$). Recurrence rate following endoscopic surgery and open surgery were significantly less than endoscopic-assisted surgery ($P < .05$). In the APD cohort, the recurrence rate following endoscopic surgery was 4.7% compared to 20.6% in the endoscopic-assisted group and 22.6% in the open surgery group ($P < .05$). Among studies that reported Radkowski/Sessions grading, there was no significant difference in recurrence rates for both the IPD and APD cohorts across each stage between open and endoscopic surgery ($P > .05$).

CONCLUSIONS:

In this study, endoscopic resection had a significantly lower intraoperative blood loss and lower recurrence rate when compared to open resection. However, there was no difference in recurrence rate when analyzing the IPD and controlling for Radkowski/Sessions grading. Therefore, further large-scale studies may be required to fully elucidate treatment options.

Laryngoscope. 2013 Apr;123(4):859-69

10. Subcutaneous and sublingual immunotherapy for seasonal allergic rhinitis: a systematic review and indirect comparison.

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Abstract

BACKGROUND:

Severe allergic rhinitis uncontrolled by pharmacotherapy can adversely affect quality of life. Both subcutaneous immunotherapy (SCIT) and sublingual immunotherapy (SLIT)

have demonstrated effectiveness in this patient group; however, it remains uncertain which route of administration is more effective.

OBJECTIVES:

We sought to update existing systematic reviews on the clinical effectiveness of SCIT and SLIT versus placebo, to undertake a systematic review of head-to-head trials, and to compare the relative effectiveness of SCIT and SLIT in an adjusted indirect comparison.

METHODS:

Standard systematic review methods aimed at minimizing bias were used. Double-blind, randomized, placebo-controlled trials of SCIT or SLIT or trials of SCIT versus SLIT were included. Meta-analysis and indirect comparison meta-analysis with meta-regression were performed.

RESULTS:

Updated meta-analyses confirmed statistically significant benefits for SCIT and SLIT compared with placebo in adults and, to a lesser extent, in children. Only 1 head-to-head trial met the inclusion criteria; both this and the indirect comparisons did not provide conclusive results in favor of either SCIT or SLIT based on symptom-medication or quality-of-life scores. There was a trend toward favoring SCIT for symptom and medication scores.

CONCLUSIONS:

Although there is clear evidence of effectiveness of both SCIT and SLIT, superiority of one mode of administration over the other could not be consistently demonstrated through indirect comparison, and further research is needed to establish the comparative effectiveness of SCIT versus SLIT.

J Allergy Clin Immunol. 2013 May;131(5):1361-6.. . .