



Reader Digest

**Digested by Dr. Tarek Kandil, MD. Consultant, Students
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1. Endoscopic treatment of choanal atresia.

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Abstract

INTRODUCTION:

Choanal atresia (CA) is an infrequent congenital obliteration of the airway at the level of the posterior nasal aperture resulting in the absence of connection between the nasal cavity and the aerodigestive tract. We present our experience with an endoscopic technique for congenital CA without the use of intranasal stents.

MATERIAL AND METHOD:

We analysed a series of 10 patients with CA treated in our department from 2006 to 2012 through endoscopic surgery. We present a description of the sample and the surgical technique used.

RESULTS:

The sample consisted of 5 men and 5 women. Mean patient age was 8 years (range: 5 days-32 years). Fifty percent of patients were cases with re-stenosis requiring revision surgery. Bilateral presentation was 7 and unilateral was 3. All CA were mixed (bony-membranous). Fifty per cent of patients had an associated malformation. All patients underwent nasal endoscopic surgery without stenting. After a mean follow up of 27 months (range: 11-78 months), the success rate was 100%. No complications were observed.

CONCLUSION:

Transnasal endoscopic repair for both unilateral and bilateral CA without intranasal stenting was found to be a safe, expedient procedure that afforded minimal complications with a high success rate. Endoscopic endonasal surgery may be considered as the mainstay of treatment.



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2. Rigid nasal endoscopy in the diagnosis and treatment of epistaxis.

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Abstract

Background and Objectives: Epistaxis is one of the common symptoms encountered in the Otorhinolaryngology department. Many times the cause for epistaxis is not found on anterior and posterior rhinoscopy. The present study was undertaken to assess the role of rigid nasal endoscope in the diagnosis and treatment of epistaxis, where normal anterior and posterior rhinoscopy did not reveal any specific finding. Methods: Fifty patients with epistaxis were studied using rigid nasal endoscope under local anaesthesia. Patients who were above 15 years with nasal bleeding and who were willing for rigid nasal endoscopy were included in the study. Patients less than 15 years were not included in the study because nasal endoscopy was difficult in them under local anaesthesia. Only those patients in whom, the cause for epistaxis could not be made out on anterior and posterior rhinoscopy were chosen for the study, this was done in order to remove the bias for nasal endoscopy. Results: The use of the nasal endoscope allowed diagnosis of bleeding points and treating them directly. Epistaxis was more in male patients especially in the 3rd and after the 5th decade. On endoscopic examination, the bleeding points were identified as coming from the crevices of the lateral nasal wall, posterior spur on the septum, posterior deviation of the septum with ulcer, congested polyps, enlarged and congested adenoids, scabs or crusts in the crevices of the lateral nasal wall and angiofibroma. Endoscope also helps in the treatment of epistaxis, which includes endoscopic selective nasal packing using gelfoam, endoscopic cautery or diathermy and endoscopic polypectomy. Other patients with adenoids, scabs and crusts and angiofibroma were managed on their merits. Interpretation and Conclusion: Nasal endoscopy helps not only in the localisation of the bleeding point but also in the treatment of those bleeding areas that are situated in the posterior and lateral part of the nose.

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3. Nasal actinomycosis mimicking a foreign body.

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Abstract

Nasal actinomycosis is a rare disease. We present a case of nasal actinomycosis causing symptoms similar to those of a nasal foreign body. A 34-year-old woman presented with a long history of halitosis and unilateral offensive, purulent rhinorrhea. Rigid nasendoscopy showed a hard, dark gray mass between the middle and inferior turbinates. Computed tomography findings were typical of a nasal foreign body. Endoscopic removal of the mass was performed, and histopathology established a diagnosis of actinomycosis. We suggest that every clinician confronted with unilateral nasal symptoms and/or signs should have this clinical entity in mind, since it has justifiably been characterized as the head and neck "mimic."

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4. MP29-02: a breakthrough for the treatment of allergic rhinitis

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Abstract

Introduction: Allergic rhinitis (AR) can be challenging to treat. For many patients, current therapies (including multiple therapies) provide insufficient symptom relief. There is, therefore, a clear unmet medical need for a new and more effective AR treatment option. MP29-02 (Dymista) is a novel intranasal formulation of azelastine hydrochloride and fluticasone propionate in an advanced delivery system. Areas covered: The goal of this article is to review all MP29-02 clinical data currently published with a view to establish its potential to fill the current unmet medical need in AR. Relevant articles and abstracts were reviewed from PUBMED and conference proceedings. Expert opinion: MP29-02 represents a breakthrough in AR management for the following reasons: i) MP29-02 has been extensively studied in comparison to first-line therapies in both seasonal AR (SAR) patients and in those with chronic rhinitis (i.e., perennial allergic rhinitis [PAR] and nonallergic (vasomotor) rhinitis) in one of the



largest direct head-to-head clinical trial programmes in AR, to date. ii) With MP29-02, the efficacy of an intranasal corticosteroid (INS), the first-line choice for AR has been exceeded for the first time without safety repercussions. AR patients treated with MP29-02 experience significantly greater relief from their overall nasal and ocular symptoms compared to two first-line AR therapies, irrespective of season, symptom type, or disease severity. More patients treated with MP29-02 achieve a substantial reduction (i.e., 50% reduction) in their symptoms and also complete symptom relief and achieve these clinically relevant responses days faster than an INS or antihistamine. iii) Formulation of a topical medication is critical, and MP29-02's novel formulation and/or its device contribute to its clinical efficacy.

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5. 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.



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6. Standalone balloon dilation versus sinus surgery for chronic rhinosinusitis: A prospective, multicenter, randomized, controlled trial

Cutler J, Bikhazi N, Light J, Truitt T, Schwartz M, Investigators AT.

Abstract

BACKGROUND:

A prospective randomized controlled study was conducted on patients with chronic rhinosinusitis (CRS) to test the hypotheses that symptom improvement after balloon dilation was noninferior to functional endoscopic sinus surgery (FESS) and balloon dilation was superior to FESS for postoperative debridements. **METHODS:** Adults with uncomplicated CRS of the maxillary sinuses with or without anterior ethmoid disease who met criteria for medically necessary FESS were randomized 1:1 to office balloon dilation or FESS and followed for 6 months. A minimum of 36 patients per arm were required to test the hypotheses with 90% power. Symptom improvement using the validated 20-item Sino-Nasal Outcome Test (SNOT-20) survey, debridements, recovery outcomes, complications, and revision surgeries were compared between groups. **RESULTS:** Ninety-two patients (50 balloon dilation; 42 FESS) were treated. Mean SNOT-20 improvement was 1.67 +/- 1.10 and 1.60 +/- 0.96 in the balloon and FESS arms, respectively. Both groups showed clinically meaningful and statistically significant (p less than 0.0001) improvement and the balloon arm was noninferior (p less than 0.001) to FESS. The mean number of postprocedure debridements per patient was 0.1 +/- 0.6 in the balloon arm versus 1.2 +/- 1.0 in the FESS arm, with the balloon group showing superiority (p less than 0.0001). Occurrence of postoperative nasal bleeding ($p = 0.011$), duration of prescription pain medication use (p less than 0.001), recovery time ($p = 0.002$), and short-term symptom improvement ($p = 0.014$) were all significantly better for balloon dilation versus FESS. No complications occurred in either group and one revision surgery was reported in each arm. **CONCLUSION:** Balloon dilation is noninferior to FESS for symptom improvement and superior to FESS for postoperative debridements in patients with maxillary and anterior ethmoid disease. Balloon dilation is an effective treatment in patients with uncomplicated CRS who meet the criteria for medically necessary FESS.

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7. Two-hole trephination (Muntarhorn) technique for a large frontal sinus osteoma: a case report.

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Abstract

OBJECTIVE:

To present an alternative surgical option for frontal sinus osteoma.

MATERIAL AND METHOD:

A woman presented with a symptomatic large osteoma in right frontal sinus. Two-hole trephination was planned to remove the osteoma using nasal endoscope and a drill in each hole.

RESULTS:

The osteoma was drilled and removed transnasally. Two months later, two small fragments of osteoma were detected remaining in the lateral aspect of the sinus. The fragments were removed successfully with the same technique. The patient was asymptomatic six months postoperatively.

CONCLUSION:

Two-hole trephination technique or Muntarhorn technique is an attractive option for frontal sinus osteoma.

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8. Benign inverted papilloma with intracranial extension: prognostic factors and outcomes.

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Abstract

We describe a case of benign inverted papilloma with intracranial extension treated with endoscopic resection combined with craniotomy. Intracranial involvement of



inverted papilloma, in the absence of malignancy, is uncommon. We present an analysis of the literature identifying the characteristics and outcomes of benign intracranial inverted papilloma. PubMed database was searched using keywords intracranial, inverted or inverting, and papilloma. There are 17 reports of benign inverted papilloma with intracranial extension reported with a mean age of 49.2 years (range, 23 to 92 years), a female predominance, 22% of cases with an associated mucocele, and 60% recurrent disease. The most common sites of invasion are the frontal sinus or cribriform plate. The prognosis for benign intracranial inverted papilloma is dependent on the presence of dural invasion and the achievement of total resection. There are no reported recurrences after craniofacial resection with a mean follow-up of 7.9 years. Adjuvant radiation therapy has demonstrated benefit in cases of residual disease after resection. We expect that endoscopic resection, the standard treatment for sinonasal inverted papilloma, will be increasingly used in the presence of intracranial extension.

Skull Base Rep. 2011 Nov;1(2):145-50

9. Fibroblast-growth-factor-receptor-1 as a potential therapeutic target in sinonasal cancer?

Schröck A, Göke F, Wagner P, Bode M, Franzen A, Huss S, Agaimy A, Ihrler S, Kirsten R, Kristiansen G, Bootz F, Lengerke C, Perner S.

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Abstract

Background Despite multimodal treatment, sinonasal malignancies have an unfavorable prognosis. Here, we aimed to elucidate if these tumors harbor amplifications of the fibroblast growth factor receptor 1 (FGFR1) which has recently been identified as a potential therapeutic target in squamous cell lung cancer. Methods 112 primary tumors (including squamous cell carcinoma (SCC), carcinoma associated with an inverted papilloma (INVC), sinonasal undifferentiated carcinoma (SNUC), adenocarcinoma (AD), adenoidcystic carcinoma (ACC), aesthesioneuroblastoma (ANB), and 9 corresponding lymph node metastases) were assessed by FISH for FGFR1 copy number status. HPV status was assessed by p16 IHC as a surrogate marker. Results FGFR1 amplification was found in subsets of sinonasal SCCs (20%), INVCs (33%) and SNUCs (5%). In all cases, metastatic tumor samples shared the same FGFR1 amplification status as the corresponding primary tumor tissue. None of the FGFR1-amplified tumors expressed p16. Conclusions FGFR1 amplification represents a potential molecular target in a subset of patients with sinonasal cancer. *Head Neck*, 2013.

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10. Treatment outcomes of pediatric rhinoplasty: The Asan Medical Center experience.

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Abstract

OBJECTIVE:

Performing rhinoplasty in children has been an issue of some debate due to concerns about potential harmful effects on nasoseptal growth. However, there is a paucity of evidence describing the outcomes of pediatric rhinoplasty. This study presents our experience of performing this procedure in children of 17 years of age and younger.

METHODS:

The study population consisted of 64 Korean children between 4 and 17 years of age who underwent rhinoplasty between May 2003 and August 2011. Forty-six of the patients were boys and 18 were girls with a mean follow-up period of 59 months. The diagnosis of the patients, the extent of the surgical maneuver performed, and the surgical outcomes were reviewed. Subjective satisfaction of the patients was investigated by telephone interview. Surgical outcomes, which were judged by two independent ENT surgeons, were evaluated by comparing preoperative and postoperative photographs. Satisfaction scores were graded using a visual analog scale (from 1=satisfied, to 4=dissatisfied). Anthropometric measurements of nasal parameters were performed preoperatively and postoperatively.

RESULTS:

Rhinoplasty was performed in our patient cohort due to a deviated nose (32.8%), nasal bone fracture (18.8%), flat nose (6.3%), nasal mass (4.7%), hump nose (3.1%), nasal dermoid sinus cyst (1.6%), and additional cosmetic rhinoplasty for planned septoplasty (32.8%). The median patient satisfaction score was 2.09 compared with a median doctor satisfaction score of 1.81. Anthropometric measurements showed statistically significant improvements in nasal tip projection, nasal length, dorsal height, and radix height after rhinoplasty. Seventeen patients (26.6%) experienced esthetic dissatisfaction such as deviation, tip depression, bulbous tip, short nose, and nostril asymmetry. Eight patients (12.5%) experienced postoperative difficulty in nasal breathing, and two patients (3.1%) complained of transient nasal pain after rhinoplasty. Six patients (9.4%) underwent



revision surgery, and four patients (6.3%) were seriously considering a revision operation.

CONCLUSIONS:

The outcome analysis in our series reveals that rhinoplasty in children is complicated by a high rate of revision and esthetic dissatisfaction. The results of this study may indicate that surgeons should have a conservative attitude and apply strict indication in selecting pediatric rhinoplasty candidates.

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