



Reader Digest

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

1. [Congenital nasal obstruction due to choanal atresia: case series].

Zanetta A, Rodríguez H, Quiroga V, Cuestas G, Tiscornia C.

Servicio de Endoscopia Respiratoria, Hospital de Pediatría Prof. Dr. Juan P. Garrahan, Buenos Aires.

adrianzanetta67@hotmail.com

Abstract

Nasal obstruction in neonates is a potential fatal condition because of their exclusive nasal breathing. The most common congenital causes include choanal atresia, dermoid cyst, glioma and encephalocele. Choanal atresia is the most common congenital nasal anomaly. When bilateral, it presents with respiratory distress at birth. Unilateral atresia is manifested by respiratory failure and unilateral rhinorrhea, and may go along unnoticed. Diagnosis is suspected in the absence of airflow in the nasal cavity and for the inability to advance a nasogastric tube. Diagnosis is confirmed by endoscopic examination and computed tomography. The definitive treatment is surgical, and there are different techniques and surgical approaches. We describe our experience with 7 patients with this disease, successfully treated by transnasal endoscopic technique.

Arch Argent Pediatr. 2012 Apr;110(2):152-5

2. Nasal manifestations of systemic diseases.

Prokopakis E, Nikolaou V, Vardouniotis A, Jorissen M.

Department of Otorhinolaryngology, University of Crete School of Medicine, Heraklio, Greece. eprokopakis@gmail.com

Abstract

OBJECTIVES:

Signs and symptoms of the sinonasal tract may be originated in any organ system. Distinguishing these from original sinonasal disease poses a great diagnostic challenge. The ENT specialist usually faces an unresponsive or relapsing case, with an atypical presentation. We address this issue by trying to provide a wider perspective when dealing with sinonasal manifestations.

METHODOLOGY:

We reviewed the literature exploring heterogeneous groups of diseases and systemic conditions that might interfere with normal sinonasal physiology. The most current and valid information have been included in an effort to delineate such manifestations and clarify the distinguishing signs and tests.



RESULTS:

A great variety of systemic conditions with sinonasal manifestations, including connective tissue, autoimmune, infectious, vascular, hematological, gastrointestinal, and endocrine diseases, were included. We address their distinguishing characteristics and diagnostic work-up.

CONCLUSIONS:

Signs and symptoms of the sinonasal tract can originate from either local or systemic disorders. The keys to dealing with such disorders are understanding the patterns in which systemic diseases can manifest, and using special diagnostic tools specific to each condition to confirm or rule out particular diagnoses.

B-ENT. 2013;9(3):171-84

3. Transnasal endoscopic treatment of cerebrospinal fluid leaks: 10 years' experience.

Oles K, Skladzien J, Tomik J, Leszczynska J.

Department of Otolaryngology, Head and Neck Surgery, Jagiellonian University, Krakow, Poland. olokrista@op.pl

Abstract

The endoscopic repair of cerebrospinal fluid (CSF) leaks has become a routine procedure. This study describes the endoscopic closure of CSF leaks in a large series (36 patients) at the Jagiellonian University over 10 years (1999 to 2009). We describe the aetiology, defect location, graft material, presence of encephalocele, history of meningitis, intracranial pressure, recurrence, and follow-up. In our studies the aetiology of CSF leak was spontaneous in 4 cases, traumatic in 9, and iatrogenic in 23. The defect was most commonly located near the ethmoid and sphenoid bones. Our initial success rate after transnasal endoscopic treatment was 88.9% (32/36). However, the overall success rate of 97.2% (35/36) and the low morbidity in this series support the endoscopic approach as the standard of care for CSF leak closure. Follow-up ranged from 3 months to 5 years. Importantly, this high success rate can be achieved without the use of intrathecal fluorescein or a lumbar drain.

B-ENT. 2013;9(3):201-6

4. Endoscopic anatomy of the middle ethmoidal artery

Wang L, Youseef A, Al Qahtani AA, Gun R, Prevedello DM, Otto BA, Ditzel L, Carrau RL.

Department of Otolaryngology-Head and Neck Surgery, Wexner Medical Center, The Ohio State University, Columbus, OH; Department of Otolaryngology-Head and Neck Surgery, 1st Affiliated Hospital, Zhengzhou University, Zhengzhou, Henan, China.



Abstract

BACKGROUND:

The purpose of this study was to describe the incidence of the middle ethmoidal artery and its anatomical nuances via an endoscopic endonasal approach.

METHODS:

A cadaveric study was performed on 22 adult specimens. First, a frontal sinusotomy and ethmoidectomy were performed via an endoscopic endonasal approach in order to fully expose the anterior skull base. Subsequently, the lamina papyracea and the bone of the canals covering the ethmoidal neurovascular bundles were removed to identify the anterior, middle, and posterior ethmoidal arteries. Presence, laterality, and location of the middle ethmoidal artery were recorded.

RESULTS:

A total of 14 middle ethmoidal arteries were identified (10 right and 4 left), among 44 sides (22 specimens), accounting for an incidence of 31.8%. Bilateral middle ethmoidal arteries were found in 3 of 22 specimens (14%). Endonasal endoscopy features of the middle ethmoidal artery were noted.

CONCLUSION:

This is the first study assessing the anatomical features of the middle ethmoidal arteries from an endonasal endoscopic perspective. The findings of this research have clinical significance in guiding surgeries that involve the medial orbital wall, intractable epistaxis, and anterior skull base pathologies, as well as endoscopic endonasal surgeries.

Int Forum Allergy Rhinol. 2013 Dec 5

5. Upper respiratory conditions: acute and chronic sinusitis

Hueston WJ1, Kaur D2.

1Medical University of South Carolina, 5 Charleston Center Drive MSC 192, Charleston, SC 29425, huestowj@musc.edu. 2Medical University of South Carolina, 5 Charleston Center Drive MSC 192, Charleston, SC 29425, kaurd@muscl.edu.

Abstract

Rhinosinusitis is one of the most common conditions seen by family physicians. Most cases are viral in nature and resolve spontaneously. When symptoms persist for 10 days or more or are accompanied by severe pain and fever, bacterial sinusitis may be present. Current guidelines recommend that acute bacterial sinusitis be treated with amoxicillin-clavulanate. Chronic bacterial sinusitis typically involves a change in the sinus ostia and microbiology. This rarely resolves



with antibiotic treatment alone and often warrants surgical intervention. Fungal sinusitis is a rare condition seen more often in immunosuppressed individuals and manifests in severe symptoms along with possible neurologic findings.

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FP Essent. 2013 Dec;415:11-6

6. Inducible nitric oxide synthase (iNOS) in sinonasal polyp pathogenesis.

Muluk NB, Arikan OK, Atasoy P, Kiliç R, Yalçinozan ET.

ENT Department, Kirikkale University, Faculty of Medicine, Kirikkale, Turkey. nurayb@hotmail.com

Abstract

OBJECTIVES:

We investigated the role of inducible nitric oxide synthase (iNOS) in the pathogenesis of sinonasal polyps.

METHODS:

Adult patients (21 men, 3 women) with nasal polyposis underwent functional endoscopic sinus surgery. Nine adults without polyps (6 men) who underwent septoplasty and/or rhinoplasty served as controls. Polyp specimens came from three regions: the maxillary sinus (10), ethmoid sinus (14), and nasal cavity (10). Control group samples (9) came from the inferior turbinate. Specimens were evaluated in eight mucosal layers for count and distribution of inflammatory cells and iNOS expression. An iNOS positivity index (PI) was determined for the epithelium (E), subepithelial layer of the lamina propria (SE), and deep paraglandular layer of the mucosa (D).

RESULTS:

Polymorphonuclear cell (PMNC) % values of the ethmoid and maxillary sinus and overall ethmoid sinus PI were significantly higher in the polyp group. Patients with longer polyp duration, D-perivascular (D-pv), and a higher Brinkmann index had decreased ethmoid sinus D PIs. However, in older patients and patients with longer polyp duration, perivascular PIs increased in maxillary sinus SE and D, respectively. Furthermore, as PMNC % and iNOS-PMNC PI increased, SE_glandular and epithelial_apical iNOS values decreased. In the ethmoid and maxillary sinuses, iNOS_D_ endothelial values increased but decreased in the nasal cavity.

CONCLUSIONS:

iNOS may play a role in sinonasal polyp pathogenesis, especially in mucosal SE and D layers. Increased vascular permeability, stromal edema, inflammatory cell migration into the stroma of the mucosa, and increased mucosal gland secretion may result in polyp formation. B-ENT. 2013;9(3):207-16



7. **Medial maxillectomy in recalcitrant sinusitis: when, why and how?**

Konstantinidis I, Constantinidis J.

2nd Academic ORL Department, Aristotle University, Papageorgiou Hospital, Thessaloniki, Greece.

Abstract

PURPOSE OF REVIEW:

We reviewed all journal articles relevant to endoscopic medial maxillectomy in patients with recalcitrant chronic maxillary sinusitis in order to present all indications, the underlying pathophysiology and the developed surgical techniques.

RECENT FINDINGS:

Despite the high success rate of middle meatal antrostomy, cases with persistent maxillary sinus disease exist and often need a more extended endoscopic procedure for the better control of the disease. Such surgical option uses gravity for better sinus drainage and offers better saline irrigation, local application of medications and follow-up inspection. An endoscopic medial maxillectomy and its modified forms offer a wider surgical field and access to all 'difficult' areas of the maxillary sinus.

SUMMARY:

Patients with previous limited endoscopic sinus surgery or extended open surgery, cystic fibrosis, extensive mucocoeles, allergic fungal sinusitis, odontogenic infections, foreign bodies and so on may suffer from recurrent disease requiring an endoscopic medial maxillectomy. Depending on the disease, various modifications of the procedure can be performed preserving the anterior buttress, nasolacrimal duct and inferior turbinate if possible .

Curr Opin Otolaryngol Head Neck Surg. 2013 Nov 13. [Epub ahead of print]

8. **Endoscopic removal of large orbito-ethmoidal osteoma in pediatric patient: Case report.**

Alotaibi N, Hanss J, Benoudiba F, Bobin S, Racy E.

Otorhinolaryngology Department, Kremlin-Bicêtre Hospital, Assistance Publique Hopitaux de Paris (AP-HP), Le Kremlin Bicêtre, France. Electronic address: naif.alotaibi@u-psud.fr.

Abstract

INTRODUCTION:

Osteoma is a benign slow growing bone tumor with a prevalence of 3% of all benign paranasal sinuses tumors, with a peak incidence between the fourth and sixth decades, mostly involving frontal sinuses.(1) **PRESENTATION OF CASE:** We present a case of a large right ethmoidal sinus osteoma in a 12-year-old boy, complaining of frontal headaches and



excessive lacrimation of the right eye. CT scan showed a very large tumor in the right anterior ethmoidal sinus (30mm×25mm×15mm).

DISCUSSION:

Large osteomas of the paranasal sinuses are usually resected by external approaches. However, the minimally invasive endonasal approach, which minimizes external facial scarring, is challenging for such large lesions in pediatrics. In the presented case, the osteoma was successfully resected exclusively by endoscopy-guided endonasal approach assisted by neuronavigation, with no peri or postoperative complications.

CONCLUSION:

An endoscopic approach assisted with neuronavigation may be a minimally invasive and safe procedure for managing large osteoma of the ethmoidal sinus in pediatrics patients

Int J Surg Case Rep. 2013;4(12):1067-70

9. Does human papilloma virus play a role in sinonasal inverted papilloma?

Govindaraj S, Wang H.

Department of Otolaryngology-Head and Neck Surgery, Icahn School of Medicine at Mount Sinai, New York, New York, USA.

Abstract

PURPOSE OF REVIEW:

Inverted papillomas are a benign sinonasal tumor with a propensity for recurrence and malignant transformation. Although many investigations have been made into the nature of this disease, its etiology and causes for malignant transformation have yet to be fully elucidated. It is the authors' objective to present a review on management of the disease and evaluate the present relationship between human papilloma virus (HPV) and inverted papilloma.

RECENT FINDINGS:

A causal relationship between HPV and the pathogenesis and progression of inverted papilloma has been posited since the 1980s. Although widely varied HPV detection rates have been reported, recent studies have noted a substantial increase in both recurrence and malignant transformation in HPV-infected inverted papillomas. However, exact cellular mechanisms by which infection leads to subsequent recurrence and development of carcinoma have yet to be elucidated.

SUMMARY:

Evidence exists suggesting that HPV infection plays a role in the progression of inverted papilloma and confers an increased risk for recurrence and malignant transformation. PCR is the preferred detection method, and fresh or frozen specimens are the ideal source of tissue for evaluation. Although multiple studies have detected an association between



HPV and inverted papilloma (both recurrent and malignant transformation), further studies are necessary to elucidate the underlying molecular pathways before an association can be changed to causation.

Curr Opin Otolaryngol Head Neck Surg. 2013 Dec 5.

10. Classifying Deformities of the Columella Base in Rhinoplasty.

Lee MR, Tabbal G, Kurkjian TJ, Roostaeian J, Rohrich RJ.
Dallas, TX.

Abstract

INTRODUCTION:

Fundamental to the evolution of rhinoplasty is greater focus on the columella and its contribution to the overall aesthetic outcome. While much has been published in regards to the columella assessed in the frontal and lateral views, a paucity of literature exists regarding the basal view of the columella. The objective of this study was to evaluate the spectrum of columella deformities and devise a working classification system based on underlying anatomy.

PATIENTS AND METHODS:

A retrospective study was performed of 100 consecutive patients that presented for primary rhinoplasty. The preoperative basal view photographs for each patient were reviewed to determine whether they possessed ideal columellar aesthetics. Patients that had deformity of their columella were further scrutinized to determine the most likely underlying etiology of the subsequent abnormality. Deformity etiologies were characterized as (1) caudal septum or nasal spine, (2) medial crura, (3) soft tissue, or (4) combination of septum or spine, medial crura, and/or soft tissue. Patients found to have abnormal volumes of soft tissue were further determined to have excess or insufficient soft tissue.

RESULTS:

Of the 100 patient photographs assessed only 16% (16/100) were found to display ideal norms of the columella. These patients exhibited normal nostril ideals with an appropriate columellar relative width and the aforementioned contour transition. The remaining 84% (84/100) of patients had some form of aesthetic abnormality and were further classified based off of the most likely underlying etiology. Type 1 deformities (caudal septum and/or spine) comprised 18% (18/100), Type 2 (medial crura) 12% (12/100), Type 3 (soft tissue) 6% (6/100), and Type 4 (combination) 48% (48/100).

CONCLUSION:

Successful rhinoplasty requires diagnosis and treatment of the columella base. Deformities may be classified according to the underlying etiology with combined deformity being the most common. Use of the herein discussed classification scheme will allow surgeons to approach this region in a comprehensive manner. Furthermore, use of such a system allows for a more standardized approach for surgical treatment. *Plast Reconstr Surg.* 2013 Dec 17.

