Pan Arab Rhinology Society
PARS Reader's Digest

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

1. The endoscopic transseptal approach for choanal atresia repair.

Wormald PJ1, Zhao YC1, Valdes CJ2, Pacheco AE3, Ha TN1, Tewfik MA4, Wabnitz D5, Shaw CL5.

Abstract

BACKGROUND:

There are many standard repair options for choanal atresia including puncture, dilatation and drilling of the atretic plate. Most of these techniques involve postoperative stenting, which may promote granulation and scarring, with possible progression to restenosis. This article describes a novel approach for choanal atresia repair without postoperative stenting.

METHODS:

This article describes our experience with this choanal atresia repair technique utilized in 16 pediatric patients and 1 adult patient across multiple tertiary pediatric and rhinology centers during 2008 through 2015. Seven cases were bilateral and 10 were unilateral. Surgery was performed using an endoscopic transseptal approach with preservation of the mucosa and creation of flaps. No stents or packing was used. The main outcome measures were: response to treatment based on endoscopic examination, need for further revision and incidence of complications.

RESULTS:

All patients underwent routine postoperative endoscopic inspection of their nasal cavity, postnasal space, and assessment of neochoanal patency. The neochoanae of all patients remained patent to a minimum follow-up duration of 9 months with most patients follow up for 2 years or more. Two neonatal patients required transfusion postoperation from intraoperative bleeding. Two pediatric patients developed postoperative respiratory complications. One patient required revision surgery for nasal vestibule scarring from incision made on the nasal alar to facilitate the initial endoscopic approach.

CONCLUSION:

This novel endoscopic transseptal repair technique is effective in the management of choanal atresia. Careful fashioning of mucosal flaps and the omission of stenting has

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2. Trauma of the midface.

Kühnel TS[1], Reichert TE[2].

Abstract

Fractures of the midface pose a serious medical problem as for their complexity, frequency and their socio-economic impact. Interdisciplinary approaches and up-to-date diagnostic and surgical techniques provide favorable results in the majority of cases though. Traffic accidents are the leading cause and male adults in their thirties are affected most often. Treatment algorithms for nasal bone fractures, maxillary and zygomatic fractures are widely agreed upon whereas trauma to the frontal sinus and the orbital apex are matter of current debate. Advances in endoscopic surgery and limitations of evidence based gain of knowledge are matters that are focused on in the corresponding chapter. As for the fractures of the frontal sinus a strong tendency towards minimized approaches can be seen. Obliteration and cranialization seem to decrease in numbers. Some critical remarks in terms of high dose methylprednisolone therapy for traumatic optic nerve injury seem to be appropriate. Intraoperative cone beam radiographs and preshaped titanium mesh implants for orbital reconstruction are new techniques and essential aspects in midface traumatology. Fractures of the anterior skull base with cerebrospinal fluid leaks show very promising results in endonasal endoscopic repair.

GMS Curr Top Otorhinolaryngol Head Neck Surg. 2015 Dec 22;14:Doc06.

3. Comparison of outcomes between endoscopic surgery and conventional nasal packing for epistaxis in the posterior fornix of the inferior nasal meatus.

Zou Y1, Deng YQ2, Xiao CW3, Kong YG4, Xu Y5, Tao ZZ6, Chen SM7.

Abstract

OBJECTIVE:

To investigate the clinical features of epistaxis in the posterior fornix of the inferior nasal meatus and compare the treatment outcomes of endoscopic surgery and conventional nasal packing for this intractable form of epistaxis.

METHODS:

Between August 2011 and August 2014, the medical records of 53 adult patients with idiopathic epistaxis in the posterior fornix of the inferior nasal meatus diagnosed by nasal endoscopy were obtained from our department. Of these, 38 patients underwent endoscopic surgery (surgery group) and 15 received a nasal pack (packing group). The patients' background characteristics, incidence of re-bleeding, extent of discomfort after treatment as assessed using a 10-point visual analogue scale (VAS) and incidence of nasal cavity adhesion after treatment were analysed.

RESULTS:

There were no significant differences in background characteristics between the two groups. The incidence of re-bleeding (0/38 vs. 4/15, surgery vs. control, P = 0.001), VAS score for discomfort (2.4 ± 1.4 vs. 7.6 ± 1.0, surgery vs. control, P = 0.001) and incidence of nasal cavity adhesion after treatment (2/38 vs. 7/15, surgery vs. control, P = 0.007) were significantly lower in the surgery group than in the packing group.

CONCLUSION:

Endoscopic surgery is superior to conventional nasal packing for the management of epistaxis in the posterior fornix of the inferior nasal meatus. During surgery, it is crucial to expose the bleeding sites by shifting the inferior turbinate inward by fracture

Pak J Med Sci. 2015 Nov-Dec;31(6):1361-5.

4. [New therapeutic strategies in allergic rhinitis].

Sha JC1, Meng CD1, Xiu Q1, Zhu DD1.

Abstract

Allergic rhinitis (AR) is a nasal inflammatory, IgE-mediated disease that occurs when some individuals inhales something he or she is allergic to, such as pollen or animal dander. It is also a refractory disease with high prevalence in the field of rhinology. The treatment of AR is really a difficult and challenging task because of the high prevalence, economic burden and the interference to the quality of life. At present, nasal corticosteroid and antihistamines were the mainly therapies, however, there is up to 40% patients not satisfactory to these therapies. So exploring new therapy or target is necessary. This article will review the results of previous studies focused on the new therapies of AR.

Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2016 Feb 7;51(2):150-5

5. [Surgical anatomy, technique and application of endoscopic endonasal transpterygoid approach in skull base surgery].

Liu J1, Han J, Yang D2, Liu D, Li R, Yu Y, Zhang Q, Fernandez Miranda JC, Gardner PA, Snyderman CH.

Abstract

OBJECTIVE:

To identify the landmarks of transpterygoid approach and to report its application in a series of cases.

METHODS:

Two silicon-injected adult cadaveric heads(4 sides) were dissected by performing an endoscopic endonasal transpterygoid approach after CT scanning for imaging guidance. High-quality pictures were obtained. This approach was used to treat twelve patients with skull base lesions including 3 spontaneous cerebrospinal fluid (CSF) leaks in the lateral recess of the sphenoid sinus, 2 neurofibromas and 2 Schwannomas involving the pterygopalatine fossa and infratemporal fossa, 1 dermoid cyst involving the middle fossa and infratemporal fossa, 1 invasive fungal sinusitis invading the middle fossa base, 1 basal cell adenoma in the upper parapharyngeal space, 1 chondrosarcoma in the parasellar region and 1 adenoid cystic carcinoma. Clinical records were reviewed.

RESULTS:

In terms of approach dissection, important landmarks, such as the sphenopalatine foramen and artery, vidian canal and nerve, foramen rotundum and maxillary branch of trigeminal nerve, foramen ovale and mandibular branch of trigeminal nerve, as well as pterygoid segment of Eustachian tube were identified. In terms of clinical data, three patients with spontaneous CSF leak underwent repair. Six patients with benign lesions underwent complete tumor resection. In the patient with invasive fungal disease, thorough debridement was undertaken and antifungal drug was administered for one month. For these benign skull base lesions, there was no recurrence during the follow-up period. In the patient with chondrosarcoma, most of the tumor was removed in the first operation, and was followed by two endoscopic operations because of fast growth of the tumor. Final control was achieved with chemotherapy and radiation. In the patient with adenoid cystic carcinoma, tumor recurred five years after surgery, and was reoperated.

CONCLUSION:

An understanding of the landmarks of the transpterygoid approach is paramount for surgically dealing with disease located within and adjacent to the region of the pterygoid process of the sphenoid bone. The endoscopic endonasal transpterygoid approach is feasible and safe in selected patients with skull base lesions.

Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2015 Nov;50(11):909-14.

6. Acute Invasive Fungal Rhinosinusitis: A 15-Year Experience with 41 Patients.

Payne SJ1, Mitzner R2, Kunchala S3, Roland L4, McGinn JD3.

Abstract

OBJECTIVES:

To describe a 15-year single-institution experience of 41 cases of acute invasive fungal sinusitis (AIFRS), identify clinical indicators predictive of AIFRS, and discuss our approach to these high-acuity patients.

STUDY DESIGN:

Case series with chart review.

SETTING:

Tertiary referral center; The Pennsylvania State University Hershey Medical Center.

SUBJECTS AND METHODS:

A retrospective review was performed for AIFRS consultations between September 1999 and March 2014. Variables reviewed included underlying condition, presenting symptoms, absolute neutrophil count, disease extent on examination, radiographic findings, medical treatment, biopsy results, surgical treatment, and outcomes. Univariate analysis was performed to determine variables significantly associated with AIFRS. Outcome measures were assessed and patient assessment algorithm developed.

RESULTS:

Of 131 patients evaluated, 41 were diagnosed with AIFRS; 92.7% had an underlying hematologic malignancy. Disease predictive variables included absolute neutrophil count <500/μL ($P < .0001$; sensitivity = 78%), mucosal abnormalities of middle turbinate ($P < .0001$; specificity = 88%) and septum ($P < .0001$; specificity = 97%), and specifically, necrosis of the middle turbinate ($P < .0001$; specificity = 97%). Twenty-five AIFRS patients (61%) survived until discharge; 25% (n = 10) expired secondary to AIFRS infection explicitly.

CONCLUSION:

This series represents one of the largest single-institution experiences of AIFRS published to date. Timely diagnosis is necessary to improve patient outcomes and limit morbidity. Maintaining a high index of suspicion in at-risk patient populations, followed by prompt evaluation and management, is crucial in suspected AIFRS. The presence or absence of certain findings appear to correlate with biopsy results and may aid in appropriately gauging clinical suspicion for the presence of AIFRS

Otolaryngol Head Neck Surg. 2016 Feb 16

7. Case report: Endoscopic endonasal removal of large osteoma in the ethmoid sinus.

Karpishchenko SA, Bolozneva EV.

Abstract

PROBLEM:

A 25-year-old man presented with a large osteoma in the right ethmoidal sinus.

METHODOLOGY:

The osteoma was removed by an endoscopic endonasal approach with a curved diamond drill and an electromagnetic navigation system.

RESULT:

Computed tomography 3 days after surgery showed complete removal of the osteoma and normal position of the right eyeball. No long-term follow-up results were available.

CONCLUSIONS:

This clinical case highlights the use of the endoscopic endonasal approach for the safe and reliable treatment of sinus osteomas, particularly large osteomas. We also describe various manifestations of osteoma, its diagnosis, and surgical management.

B-ENT. 2015;11(4):319-23.

8. Nasal Cavity and Paranasal Sinus Diseases Affecting Orbit.

Samil KS1, Yasar C, Ercan A, Hanifi B, Hilal K.

Abstract

OBJECTIVE:

The aim of the authors was to discuss orbital complications of nasal cavity and paranasal sinus diseases.

MATERIAL AND METHOD:

Patients with nasal and paranasal sinus diseases that affected orbit were retrospectively reviewed. Patients with primary orbital abnormality and those without radiologic orbital signs were excluded. Data regarding age and gender distribution, orbital and ocular findings, radiologic findings, and presence of an additional sinonasal disease were analyzed.

RESULTS:

Disorders affecting orbit were categorized into 6 categories. Mean age was 41.25 ± 22.14 (range: 6-88) years and male:female ratio was 23:18. Overall, there were 41 patients including 11 patients with mucocele, 9 patients with sinusitis, 7 patients with fibrous dysplasia, 4 patients with nasal polyp, 4 patients with paranasal osteoma, and 6 patients with neoplasm. Major clinical presentation was proptosis in these patients.

CONCLUSIONS:

Otolaryngologists should consider the possibility of sinonasal diseases to affect orbit because of vicinity of nasal cavity and paranasal sinuses to orbit. Radiologic imaging is essential to determine the extent, extension, relation with surrounding structures, and initial diagnosis of the disease, and to plan multidisciplinary management

J Craniofac Surg. 2015 Jun;26(4):e348-51

9. Update on Select Benign Mesenchymal and Meningothelial Sinonasal Tract Lesions.

Thompson LD1, Fanburg-Smith JC2,3.

Abstract

Several benign and malignant mesenchymal and meningothelial lesions may preferentially affect or extend into the sinonasal tract. Glomangiopericytoma (GPC, formerly sinonasal-type hemangiopericytoma) is a specific tumor with a predilection to the sinonasal tract. Sinonasal tract polyps with stromal atypia (antrochoanal polyp) demonstrate unique histologic findings in the sinonasal tract. Juvenile nasopharyngeal angiofibroma (JNA) arises from specialized tissue in this location. Meningioma may develop as direct extension from its intracranial counterpart or as an ectopic tumor. Selected benign mesenchymal tumors may arise in the sinonasal tract and pose a unique differential diagnostic consideration, such as solitary fibrous tumor and GPC or lobular capillary hemangioma and JNA. Although benign and malignant vascular, fibrous, fatty, skeletal muscle, and nerve sheath tumors may occur in this location, this paper focuses on a highly select group of rare benign sinonasal tract tumors with their clinicopathological and molecular findings, and differential diagnosis .

Head Neck Pathol. 2016 Mar;10(1):95-108.

10. Pharmacologic treatment for postviral olfactory dysfunction: a systematic review.

Harless L1, Liang J1.

Abstract

BACKGROUND:

Postviral olfactory dysfunction (PVOD) is the most common cause of olfactory dysfunction. Several treatments have been presented in the literature. The objective of this study is to systematically review the existing literature on the effectiveness of pharmacologic treatments for PVOD.

METHODS:

We performed a literature search of PubMed, Ovid, and ScienceDirect from 1966 to 2014. Inclusion criteria included English-language articles containing original data on pharmacologic treatment of PVOD with ≥5 subjects, measurable outcomes, and readily available treatments. Data was collected regarding study design, subject demographic information, clinical outcomes, and level of evidence. Two investigators reviewed all articles independently.

RESULTS:

Of 445 abstracts identified, 8 articles were included, yielding 563 patients. Treatments investigated included oral corticosteroids, local injections of corticosteroids, zinc sulfate, alpha lipoic acid, caroverine, vitamin A, Ginkgo biloba, and minocycline. Outcome measures were determined by symptom scores and objective olfactory test methods-the most common being Sniffin' Sticks. Improvement was noted in subjects receiving oral corticosteroid therapy, local injections of corticosteroid, alpha lipoic acid, and caroverine, whereas vitamin A, zinc sulfate, Ginkgo biloba, and minocycline groups did not show significant improvement.

CONCLUSION:

The majority of therapies investigated that show benefit in treating PVOD are of poor quality. Although caroverine therapy showed benefit and is a level 1b study, etiologies of olfactory dysfunction other than PVOD were included as well, which clouds the results. Overall, there is no strong evidence for any pharmacologic treatment of PVOD in the literature.

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