Pan Arab Rhinology Society
PARS Reader's Digest

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

1. Stentless endoscopic repair of congenital choanal atresia: is it enough for maintaining choanal patency?

Tatar EÇ1, Öcal B2, Doğan E1, Bayır Ö1, Saka C1, Özdek A3, Korkmaz MH4.

Abstract

The aim of choanal atresia (CA) surgery is to achieve bilateral nasal patency. Among the different methods of CA repair, the endoscopic transnasal approach has gained recent popularity with the advent of endoscopic instruments and techniques. This article describes our experience regarding CA repair that was done either using or not using a stent in different periods of time in our department. Between February 2006 and February 2016, a total of 29 patients aged 2 days-53 years underwent endoscopic transnasal CA repair. While in early years stents were used to maintain nasal patency, since 2010, all cases were repaired endoscopically without stenting. Of the 29 patients, 8 were excluded because of inadequate follow-up data. The mean follow-up time for the remaining 21 patients after surgery averaged 53 months (range 12-111 months). Intranasal stents were used in 5 of 21 patients for 8 out of 32 operative sides. Of the 8 stented neochoanae, 6 (75%), restenosed at a mean time of 15.2 weeks (5-24). The restenosis rate was 25% (6/24 nasal sides) in 16 patients who underwent stentless repair. In unilateral CA, 2 of 10 (20%) patients underwent atresia repair using stents and only these cases restenosed after surgery in this group. Of the 11 patients with bilateral disease, 5 (45.4%) underwent revision surgeries. In the bilateral group, 2 of 3 (66.6%) stented patients required revision surgeries, whereas 3 of 8 (37.5%) patients who underwent stentless repair relapsed. In one patient, we have experienced an alar cartilage injury intraoperatively caused by drilling. The transnasal endoscopic repair has proved to be effective and yielded long-term satisfactory results. The use of stent seems to have no advantage over a stentless repair regarding maintenance of a patent nasal airway. Patients experienced restenosis more frequently with stenting

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2. Reassessing the Anatomic Origin of the Juvenile Nasopharyngeal Angiofibroma.

McKnight CD1, Parmar HA, Watcharotone K, Mukherji SK.

Abstract
OBJECTIVE:

A modern imaging review is necessary to further define the anatomic origin of the juvenile nasopharyngeal angiofibroma.

METHODS:

After institutional review board approval, a search from January 1998 to January 2013 yielded 33 male patients (aged 10-23 years) with pathologically proven juvenile nasopharyngeal angiofibroma lesions, as well as pretreatment computed tomography/magnetic resonance imaging. Juvenile nasopharyngeal angiofibroma involvement was assessed in the following regions: sphenopalatine foramen, pterygopalatine fossa, vidian canal, nasopharynx, nasal cavity, sphenoid sinus, choana, pterygomaxillary fissure/masticator space, orbit, and sphenoid bone.

RESULTS:

The choana and nasopharynx were involved in all 33 patients. In contrast, only 22 lesions involved the pterygopalatine fossa, 24 lesions involved the sphenopalatine foramen, and 28 lesions involved the vidian canal.

CONCLUSIONS:

Our results suggest that the juvenile nasopharyngeal angiofibroma origin is in the region of the choana and nasopharynx rather than the sphenopalatine foramen or pterygopalatine fossa.

J Comput Assist Tomogr. 2017 Jul/Aug;41(4):559-564.

3. The Algorithm-Oriented Management of Nasal Bone Fracture according to Stranc's Classification System.

Park KS1, Kim SS1, Lee WS1, Yang WS1.

Abstract
BACKGROUND:

Nasal bone fracture is one of the most common facial bone fracture types, and the surgical results exert a strong influence on the facial contour and patient satisfaction. Preventing secondary deformity and restoring the original bone state are the major goals of surgeons managing nasal bone fracture patients. In this study, a treatment algorithm was established by applying the modified open reduction technique and postoperative care for several years.

METHODS:

This article is a retrospective chart review of 417 patients who had been received surgical treatment from 2014 to 2015. Using prepared questionnaires and visual analogue scale, several components (postoperative nasal contour; degree of pain; minor complications like dry mouth, sleep disturbance, swallowing difficulty, conversation difficulty, and headache; and degree of patient satisfaction) were evaluated.

RESULTS:

The average scores for the postoperative nasal contour given by three experts, and the degree of patient satisfaction, were within the "satisfied" (4) to "very satisfied" (5) range (4.5, 4.6, 4.5, and 4.2, respectively). The postoperative degree of pain was sufficiently low that the patients needed only the minimum dose of painkiller. The scores for the minor complications (dry mouth, sleep disturbance, swallowing difficulty, conversation difficulty, headache) were relatively low (36.4, 40.8, 65.2, 32.3, and 34 out of the maximum score of 100, respectively).

CONCLUSION:

Satisfactory results were obtained through the algorithm-oriented management of nasal bone fracture. The degree of postoperative pain and minor complications were considerably low, and the degree of satisfaction with the nasal contour was high.

Arch Craniofac Surg. 2017 Jun;18(2):97-104.

4. A case of epistaxis.

Debelmas A1, Lanciaux S2, Schouman T3.

Abstract

The authors report a case of epistaxis in a 74-year-old male patient. His recent medical history documented recurrent nasal bleeding and a Le Fort 1 osteosynthesis 3 weeks before admission to our unit. A CT scan revealed a left descending palatine artery pseudoaneurysm in the left maxillary sinus that was successfully embolized. Pseudoaneurysms of the internal maxillary artery and its branches are rare life-threatening complications. This diagnosis should be considered when confronted to recurrent head and neck bleeding, especially in a context of recent maxillo-facial trauma or surgery. Embolization should rapidly be implemented.

Stomatol Oral Maxillofac Surg. 2017 Aug 16.

5. Individualized Treatment of Allergic Rhinitis According to Nasal Cytology.

Chen J1,2, Zhou Y1, Zhang L1, Wang Y1, Pepper AN2, Cho SH2, Kong W3.

Abstract

PURPOSE:

Nasal cytology is important in the diagnosis and treatment of nasal inflammatory diseases. Treatment of allergic rhinitis (AR) according to nasal cytology has not been fully studied. We plan to explore the individualized treatment of AR according to nasal cytology.

METHODS:

Nasal cytology from 468 AR patients was examined for inflammatory cell quantity (grade 0-5) and the percentage of neutrophils and eosinophils. Results were subdivided into the following categories: AR(Eos), eosinophil ≥50% of the whole inflammatory cells; AR(Neu), neutrophils ≥90%; AR(Eos/Neu), 10%≤ eosinophil <50%; AR(Low), grade 0/1 inflammatory cell quantity. Nasal cytology-guided treatment was implemented: all AR(Eos) patients (n=22) and half of the AR(Neu) patients (AR[Neu1], n=22) were treated with mometasone furoate spray and oral loratadine. Another half of the AR(Neu) patients (AR[Neu2], n=22) were treated with oral clarithromycin. Visual analog scale (VAS), symptom scores, and nasal cytology were evaluated 2 weeks before and after treatment.

RESULTS:

There were 224/468 (47.86%) AR(Eos), 67/468 (14.32%) AR(Neu), 112/468 (23.93%) AR(Eos/Neu), and 65/468 (13.89%) AR(Low) of the AR patients studied. There were no significant differences in clinical characteristics among these subgroups, except that the nasal blockage score was higher in AR(Eos) patients than in AR(Neu) patients (1.99 vs 1.50, P=0.02). Comparing AR(Eos) patients with AR(Neu1) patients 2 weeks after treatment, nasal symptoms and VAS were significantly lower in AR(Eos) patients, except for nasal blockage symptoms (P<0.05 of nasal itching and sneezing; P<0.01 for nasal secretion, total scores, and VAS). Comparing AR(Neu1) with AR(Neu2) patients, nasal symptoms, and VAS were significantly lower in AR(Neu2), except for nasal blockage and nasal itching symptoms (P<0.05 for nasal secretions, sneezing, total score, and VAS).

CONCLUSIONS:

Nasal cytology may have important value in subtyping AR and optimizing AR treatment. Treating neutrophils is very important in AR patients with locally predominant neutrophils.

Allergy Asthma Immunol Res. 2017 Sep;9(5):403-409.

6. Medical management of chronic rhinosinusitis - a review of traditional and novel medical therapies.

Schwartz JS1, Tajudeen BA2, Cohen NA3,4,5.

Abstract

INTRODUCTION:

Chronic rhinosinusitis (CRS) is a commonly seen persistent inflammatory disease process affecting the paranasal sinuses with extensively reported economic implications. Despite an elusive pathophysiologic mechanism underlying this disease process, treatment outcomes are encouraging with the employment of an array of medical and surgical therapies. Areas covered: The goal of this paper is to provide a comprehensive, up to date analysis of the literature concerning the medical management of CRS by summarizing the evidence in support of traditional medical therapies for the management of CRS in addition to highlighting novel medical therapies currently under investigation. Expert opinion: The current staples of medical therapy for CRS based on the strength of available evidence include topical and oral corticosteroids, oral antibiotics and topical saline. The introduction of immunomodulatory therapies ('Biologics') for the treatment of CRS shows promise but have yet to be employed in a widespread fashion due to the need for additional research to better elucidate their role.

Expert Opin Investig Drugs. 2017 Oct;26(10):1123-1130.

7. The analysis of 42 observations of paranasal sinus osteoma.

Dzhamaludinov YA1, Shakhnazarov G1, Dzhamaludinova PY1, Gadzhimirzaeva RG1, Gadzhimirzaeva RG1.

Abstract

The data on the incidence, localization, and histological structure of paranasal sinus osteoma (PSO) are reported along with the authors' experience in the diagnostics and surgical treatment of 42 patients presenting with this condition. The classification of the remote tumours based on their histopathological characteristics is considered. It is shown that 34 (80.9%) patients have osteomas of the compact type, 4 (9.5%) present with the tumours of the spongy type, and another 4 (9.5%) with the mixed type osteomas. It is maintained that the application of boron should be considered to facilitate the surgical removal of paranasal sinus osteomas.

Vestn Otorinolaringol. 2016;81(5):23-26.

8. Bone involvement: Histopathological evidence for endoscopic management of sinonasal inverted papilloma.

Liang N1, Huang Z1, Liu H2, Xian J3, Huang Q1, Zhou B1.

Abstract

OBJECTIVE:

The aim of this study is to provide histopathological evidence for a better understanding of the excision of bone underlying tumor.

STUDY DESIGN:

Retrospective study.

METHODS:

Thirty patients with histopathological diagnosis of sinonasal inverted papilloma (SIP) were enrolled. All patients underwent preoperative radiography to define the tumor location. The primary tumor and underlying bone, removed during endoscopic surgery, were examined under microscope.

RESULTS:

Twenty-five of 30 specimens exhibited bony hyperostosis on computed tomography (CT) images, and 12 of 30 specimens showed evidence of bony lamellar erosion. Both coexisted in 11 cases. Half of the relapse cases (8 of 16) presented bone discontinuity on CT, which indicates a higher propensity for bone involvement when compared with primary SIP. On histopathology, 26 cases presented hyperostosis and 11 cases showed bone invasion. In total, 90% of cases covered both. Sixteen cases showed a growing tendency of inflammatory cells infiltration.

CONCLUSION:

Histopathological evidence of bone involvement indicates the importance of removal of the underlying bone at the time of endoscopic tumor resection. We hypothesized that bone involvement including bone invasion and osteogenesis may be induced by the tumor, and any microscopic lesion in the bony crevices probably indicates recurrence of SIP. Furthermore, infiltration of inflammatory cells may facilitate bone involvement and cause recurrence.

Laryngoscope. 2017 Jul 19

9. Odontogenic sinusitis: developments in diagnosis, microbiology, and treatment.

Workman AD1, Granquist EJ, Adappa ND.

Abstract

PURPOSE OF REVIEW:

Odontogenic causes of sinusitis are frequently missed; clinicians often overlook odontogenic disease whenever examining individuals with symptomatic rhinosinusitis. Conventional treatments for chronic rhinosinusitis (CRS) will often fail in odontogenic sinusitis. There have been several recent developments in the understanding of mechanisms, diagnosis, and treatment of odontogenic sinusitis, and clinicians should be aware of these advances to best treat this patient population.

RECENT FINDINGS:

The majority of odontogenic disease is caused by periodontitis and iatrogenesis. Notably, dental pain or dental hypersensitivity is very commonly absent in odontogenic sinusitis, and symptoms are very similar to those seen in CRS overall. Unilaterality of nasal obstruction and foul nasal drainage are most suggestive of odontogenic sinusitis, but computed tomography is the gold standard for diagnosis. Conventional panoramic radiographs are very poorly suited to rule out odontogenic sinusitis, and cannot be relied on to identify disease. There does not appear to be an optimal sequence of treatment for odontogenic sinusitis; the dental source should be addressed and ESS is frequently also necessary to alleviate symptoms.

SUMMARY:

Odontogenic sinusitis has distinct pathophysiology, diagnostic considerations, microbiology, and treatment strategies whenever compared with chronic rhinosinusitis. Clinicians who can accurately identify odontogenic sources can increase efficacy of medical and surgical treatments and improve patient outcomes.

Curr Opin Otolaryngol Head Neck Surg. 2017 Oct 27

10. Intranasal vitamin A is beneficial in post-infectious olfactory loss.

Abstract

Vitamin A plays a decisive role in the regeneration of olfactory receptor neurons. In this retrospective study we investigated the effectiveness of topical vitamin A in patients with post-infectious and posttraumatic smell disorders. Retrospective cohort. A total of 170 patients (age range 18-70 years, mean age 52 years) participated. Forty-six patients were treated with smell training only. The remaining 124 patients received smell training and topical vitamin A. Olfactory function was assessed using the Sniffin' Sticks test kit, a validated technique to measure odor thresholds, discrimination and identification. The duration of olfactory training was 12 weeks. In patients receiving vitamin A, this was applied topically (head back position) at a dose of 10,000 IU/day for 8 weeks. Follow-up testing was performed approximately 10 months after the first assessment. Thirty-seven per cent of all post-infectious patients treated with vitamin A exhibited clinical improvement, whereas only 23% improved in controls. Using a Chi-square test, this was a significant result (χ 2 = 7.06, df = 2, p = 0.03). In addition, when comparing change in score after treatment, olfactory training + vitamin A produced significantly greater improvement compared with training alone, in discrimination score for all patients (1.4 points, p = 0.008), and in threshold and discrimination in the post-infectious group (1.6 points, p = 0.01 and 1.4 points, p = 0.04, respectively). Intranasal vitamin A at a dose of 10,000 IU per day for 2 months may be useful in the treatment of post-infectious olfactory loss. Further work with prospective, placebo-controlled studies is required to confirm these findings.

Eur Arch Otorhinolaryngol. 2017 Jul;274(7):2819-2825.