Pan Arab Rhinology Society
PARS Reader's Digest

Reader Digest
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1. Diagnostics and management of choanal atresia.

Baumann I1, Sommerburg O2, Amrhein P3, Plinkert PK4, Koitschev A3.

Abstract

Choanal atresia is a rare malformation that represents a special challenge. While bilateral choanal atresia usually needs to be surgically treated within a few days of birth, the intervention for one-sided choanal atresia can be postponed for years. Treatment planning requires adequate imaging (CT or MRI), which also serves to exclude other skull base malformities. Surgical treatment currently focuses on transnasal endoscopic techniques. Simultaneous resection of the parts of the vomer involved in the atresia seems to be important surgical success. Postoperative stenting is still controversially discussed. Postoperative application of corticosteroid nasal sprays and saline nasal rinsing for several weeks is of great importance. Due to the rarity of the diagnosis, the absence of prospective randomized controlled trials does not allow definitive statements regarding the optimal surgical technique or stenting

HNO. 2018 Apr;66(4):329-338.

2. Usefulness of indirect open reduction via a transconjunctival approach for the treatment of nasal bone fracture associated with orbital blowout fracture.

Kim TH1, Kang SJ1, Jeon SP1, Yun JY1, Sun H1.

Abstract

Background:

Nasal fracture and orbital blowout fracture often occur concurrently in cases of midface blunt trauma. Generally, these multiple fractures treatment is surgery, and typically, the nasal bone and orbit are operated on separately. However, we have found that utilizing a transconjunctival approach in patients with concurrent nasal bone fracture and orbital blowout fracture is a useful method.

Methods:

The participants in the present study included 33 patients who visited the Plastic Surgery outpatient department between March 2014 and March 2017 and underwent surgery for nasal fracture and orbital blowout fracture. We assessed patients' and doctors' satisfaction with surgical outcomes after indirect open reduction via a transconjunctival approach for the treatment of nasal bone fracture with associated orbital blowout fracture.

Results:

According to the satisfaction scores, both patients and doctors were satisfied with transconjunctival approach.

Conclusion:

We presented here that our method enables simultaneous operation of nasal fracture accompanied by orbital blowout fracture, rather than treating the two fractures separately, and it allows precise reduction of the nasal fracture by direct visualization of the fracture site without any additional incisions or difficult surgical techniques. Also, by preventing the use of excessive force during reduction, this method can minimize damage to the nasal mucosa, thereby reducing the incidence of nasal bleeding.

Arch Craniofac Surg. 2018 May 24.

3. Is epistaxis associated with arterial hypertension? A systematic review of the literature.

Kikidis D1, Tsioufis K, Papanikolaou V, Zerva K, Hantzakos A.

Abstract

Both epistaxis and hypertension are frequent problems in the adult population. The relationship between the level of arterial pressure and incidence of epistaxis in a patient with hypertension is a question that appears frequently in the clinical practice. A systematic review of the literature regarding the relation of arterial hypertension with epistaxis was performed through MEDLINE and EMBASE. All studies, whether examining the correlation of arterial pressure at presentation of a patient with nasal bleeding or the repercussion of episodes of epistaxis in hypertensive patients, were included in this review. Studies were evaluated independently by two reviewers according to a standard evaluation form. Overall, nine studies fulfilled our inclusion criteria. Five of them were single-group (patient) studies, while the remaining four included a control group. In eight studies, the patient group included patients with epistaxis, while one focused on hypertensive patients. Six out of nine studies agree that arterial pressure is higher at the time of

epistaxis, as compared to the control group or to the general population. Seven out of nine studies conclude that there is cross-correlation between arterial pressure and the actual incident of epistaxis. The presence of high arterial blood pressure during the actual episode of nasal bleeding cannot establish a causative relationship with epistaxis, because of confounding stress and possible white coat phenomenon, but may lead to initial diagnosis of an already installed arterial hypertension.

Eur Arch Otorhinolaryngol. 2014 Feb;271(2):237-43.

4. Intravenous vitamin C in the treatment of allergies: an interim subgroup analysis of a long-term observational study.

Vollbracht C1, Raithel M2, Krick B1, Kraft K3, Hagel AF4.

Abstract

Objective Oxidative stress appears to be a key factor in the pathogenesis of allergic diseases and a potential therapeutic target in allergy treatment. Allergic diseases are reportedly associated with reduced plasma levels of ascorbate, which is a key physiological antioxidant. Ascorbate prevents excessive inflammation without reducing the defensive capacity of the immune system. Methods An interim analysis of a multicenter, prospective, observational study was conducted to investigate the change in disease-specific and nonspecific symptoms (fatigue, sleep disorders, depression, and lack of mental concentration) during adjuvant treatment with intravenous vitamin C (Pascorbin®; Pascoe, Giessen, Germany) in 71 patients with allergy-related respiratory or cutaneous indications. Results Between the start and end of treatment, the mean sum score of three disease-specific symptoms decreased significantly by 4.71 points and that of four nonspecific symptoms decreased significantly by 4.84 points. More than 50% of patients took no other allergy-related medication besides vitamin C. Conclusions Our observations suggest that treatment with intravenous high-dose vitamin C reduces allergy-related symptoms. Our observations form a basis for planning a randomized controlled clinical trial to obtain more definitive evidence of the clinical relevance of our findings. We also obtained evidence of ascorbate deficiency in allergy-related diseases

J Int Med Res. 2018 Jan 1:300060518777044

5. A multi-institutional review of outcomes in biopsy-proven acute invasive fungal sinusitis.

Wandell GM1, Miller C1, Rathor A2, Wai TH3, Guyer RA4, Schmidt RA5, Turner JH4, Hwang PH2, Davis GE1, Humphreys IM1.

Abstract

BACKGROUND:

Acute invasive fungal sinusitis (AIFS) is a rare, aggressive infection occurring in immunocompromised patients. In this study we examined factors that affect survival in AIFS, and whether immune-stimulating therapies (IST) improve survival.

METHODS:

Pathology records of biopsy-proven AIFS were reviewed from 3 academic institutions from 1995 to 2016. Univariate and multivariate Cox regressions were performed at 1 and 3 months from diagnosis.

RESULTS:

One hundred fourteen patients were included; 45 received IST. In the univariate analysis, the following factors were associated with worse survival: hematologic malignancy (3-month hazard ratio [HR], 3.7; p = 0.01); recent chemotherapy (within 1 month of AIFS diagnosis) (3-month HR, 2.3; p = 0.02); recent bone marrow transplant (BMT) (3-month HR, 2.5; p = 0.02); and infection with atypical fungi (1-month HR, 3.1; p = 0.04). The following were associated with improved survival in univariate analysis: increasing A1c% (1-month HR, 0.7; p = 0.01) and surgical debridement (1-month HR, 0.1; p = 0.001). One third of patients with a hematologic malignancy had an absolute neutrophil count (ANC) >1000 at the time of diagnosis. ANC was not associated with prognosis in these patients. The following were associated with worse survival in multivariate analyses: hematologic malignancy; recent chemotherapy; atypical organisms; and cavernous sinus extension. In multivariate analyses, IST was associated with a 70% reduction in mortality at 1 month (p = 0.02).

CONCLUSION:

We presented the largest series of AIFS. Further studies are needed to examine the importance of ANC in diagnosis and prognosis. Patients diagnosed with atypical organisms may be at higher risk of death. IST likely improves short-term survival, but prospective studies are needed

Int Forum Allergy Rhinol. 2018 Jul 6.

6. Adjuvant electrostimulation therapy for chronic rhinosinusitis.

Koch T1, Ptok M2.

Abstract

BACKGROUND:

Chronic rhinosinusitis (CRS) is one of the most common chronic diseases in Germany and is often accompanied by years of chronic rhinosinusitis. According to the current German guideline "Rhinosinusitis", the nasal application of salt solutions, topical corticosteroids and in individual cases also systemic corticosteroids appear useful for a symptomatic therapy of CRS. The evidence for other therapeutic procedures such as acupuncture, homeopathy and phytotherapeutics is seen as insufficient. The aim of the present study was to investigate whether anti-inflammatory effects of electrostimulation therapy can also be demonstrated in CRS.

METHODOLOGY:

randomized, prospective single center study, primary setting; 16 patients with moderate chronic rhinosinusitis with polyps (cRScNP), corresponding to a Lund / Mackay score of 6-12; home based electrostimulation therapy (EST) with amplitude modulated current (base frequency of 4000 Hz, frequency band of 100-250 Hz) over 2 weeks adjuvant to a concurrent sinusitis therapy with topical corticosteroids; measurement of nasal nitric oxide concentration and self-assessment of complaints with the questionnaire instrument SNOT-20 GAV; survey points t0 before EST, t1 after EST, t2 6 weeks after t1.

RESULTS:

Home based EST was performed by 16 patients. The results indicate that the positive effects of electrostimulation therapy in inflammatory processes also exist in CRS.

DISCUSSION:

Adjuvant transsinuidal electrostimulation could thus enrich the conservative therapy of CRS. Further studies with larger collectives are desirable

Laryngorhinootologie. 2018 Jul 6

7. Better surgical outcome by image-guided navigation system in endoscopic removal of sinonasal inverted papilloma.

Ahn SH1, Lee EJ1, Kim JW1, Baek KH1, Cho HJ2, Yoon JH3, Kim CH4.

Abstract

PURPOSE:

The purpose of this study was to validate and compare treatment outcomes for endoscopic resection of sinonasal inverted papilloma (IP) with or without the use of a navigation system.

MATERIALS AND METHODS:

A total of 58 patients who underwent endoscopic resection of sinonasal inverted papilloma by a single surgeon from 2007 to 2016 at our institution were retrospectively reviewed. Depending on the use of the navigation system, subjects were divided into two groups: a conventional endoscopic resection group without navigation system (CER group) and a navigation-assisted endoscopic resection group (NER group).

RESULTS:

There were 24 patients (41.4%) in the CER group and 34 patients (58.6%) in the NER group. Treatment outcomes showed that navigation-assisted endoscopic resection was a more beneficial surgical technique than conventional endoscopic resection for sinonasal IP. Post-surgical recurrence was noted in seven cases (29.2%) in the CER group and two cases (5.9%) in the NER group. Accordingly, the recurrence rate was significantly less in the NER group compared to the CER group ($p = 0.026$). There were two cases of complications (8.3%) in the CER group comprising cerebrospinal fluid leak and periorbital fat exposure, while no complications were noted for the NER group ($p = 0.167$).

CONCLUSION:

This study demonstrated that navigation-assisted endoscopic removal of sinonasal IP is helpful for reducing recurrence and avoiding surgical complications. Therefore, navigation systems should be always considered when performing endoscopic removal of sinonasal IP

J Craniomaxillofac Surg. 2018 Jun;46(6):937-941

8. Endoscopic endonasal transmaxillary ligation of a feeding artery and coblation plasma technology enables en bloc resection of advanced juvenile nasopharyngeal angiofibroma without preoperative embolization.

Morishita H1, Kobayashi M2, Takeuchi K1.

Abstract

Juvenile nasopharyngeal angiofibroma (JNA) is a hypervascular tumor and uncontrolled hemorrhage makes its removal very difficult. Although preoperative intravascular embolization of a feeding artery is recommended, serious complications such as iatrogenic thrombosis in the brain and insufficient decrease in blood flow to the tumor are concerns. Recently, coblation plasma technology has been reported to be useful for tumor removal with minimum hemorrhage under a clear surgical field. Here we report successful removal of advanced JNA without preoperative embolization, using intraoperative ligation of the maxillary artery and coblation plasma technology. The left nasal cavity of a 23-years-old man was closed by a JNA tumor at Radkowski stage IIC, which was 65mm in size and extended from the nasal cavity to the infratemporal fossa. MRA imaging showed the maxillary artery running along the posterior wall of the maxillary sinus. Therefore, the maxillary artery was first clipped using an endoscopic modified medial maxillectomy (EMMM) approach and endoscopic endonasal en bloc resection of the tumor was then completed using coblation technology with no need for blood transfusion. This case illustrates that preoperative embolization is dispensable in JNA surgery even at Stage IIC if the maxillary artery can be ligated during surgery and a coblation device can be utilized.

Auris Nasus Larynx. 2018 Jul 3

9. Endoscopic resection of sinonasal mucosal melanoma has comparable outcomes to open approaches.

Miglani A, Patel SH, Kosiorek HE, Hinni ML, Hayden RE, Lal D.

Abstract

BACKGROUND:

Endoscopic endonasal resection (EER) of sinonasal mucosal melanoma (SMM) is a newer surgical alternative to traditional external and/or open resection (OR). Studies on long-term outcomes are necessary to validate EER for this aggressive sinonasal malignancy.

OBJECTIVE:

To compare outcomes of EER versus OR in SMM.

METHODS:

A case series of patients who underwent surgical resection of SMM at a tertiary-care institution (2000-2015) was studied retrospectively. Demographics, tumor site and stage, surgical approach, surgical margin status, local control, and survival were compared between those who underwent EER and OR.

RESULTS:

Twenty-two patients met inclusion criteria. Nine underwent EER and 13 underwent OR. The mean age in the EER and OR groups was similar, 78.7 and 72.3 years, respectively. Two-thirds of patients were women (EER, 66.7%; OR, 61.5%). The nasal cavity was the most common primary tumor site (EER, 77.8%; OR, 84.6%). The local tumor stage in both groups was similar, with the majority of cases being T4 (EER, 55.6%; OR, 61.5%; p = 0.99). Negative margins were achieved in all EERs and in 69.2% of ORs. Median follow-up was 25.0 months for the overall group (range, 1.7-172.9 months), 32.6 months (range, 3.4-58.7 months) for EER and 14.1 months (range, 1.7-172.9 months) for OR cohorts. The 5-year overall survival was statistically similar in both groups (EER, 53.3%; OR, 22.7%; p = 0.214) as was disease-free survival (EER, 55.6%; OR, 22.8%; p = 0.178). Local control, however, was significantly higher in the EER cohort (EER, 85.7%; OR, 37.6%; p = 0.026).

CONCLUSION:

In carefully selected patients with sinonasal melanoma, endoscopic surgery with an experienced team may offer comparable survival and improved local control over open surgery. Prospective, multicentered studies with larger cohorts are needed to validate these results.

Am J Rhinol Allergy. 2017 May 1;31(3):200-204.

10. Management of obstructive sleep apnoea: an update on the role of distraction osteogenesis.

Leung YY1, Lai KKY.

Abstract

PURPOSE OF REVIEW:

This article reviews the current literature on the use of distraction osteogenesis as a treatment for patients with obstructive sleep apnoea (OSA). We reviewed the indications, surgical protocols and outcomes for distraction osteogenesis in paediatric and adult OSA cases described in the literature.

RECENT FINDINGS:

There is evidence that distraction osteogenesis is effective in treating children with OSA as a result of underdevelopment of jaws such as those with craniofacial syndromes. Distraction osteogenesis appears to be the only available treatment that prevents tracheostomy in some of these cases, or allows decannulation after distraction. For adult OSA patients, distraction osteogenesis is reported to be reserved for challenging cases such as OSA as a consequence of temporomandibular joint ankylosis. It is used where conventional orthognathic surgery is not feasible. The studies reported high success rate/cure rate of OSA after distraction osteogenesis. Technological advances such as three-dimensional printing assist the execution of an accurate distraction process.

SUMMARY:

Distraction osteogenesis appears to be an effective treatment for paediatric OSA patients with craniofacial anomalies, and is used in selected cases of adult with severe OSA. With the improvement in distraction device designs and computer technology, distraction osteogenesis may play a bigger role in the treatment of OSA.

Curr Opin Otolaryngol Head Neck Surg. 2018 Aug;26(4):214-220.