Pan Arab Rhinology Society
PARS Reader's Digest

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

1. Treatment of Congenital Choanal Atresia via Transnasal Endoscopic Method.

Gulşen S1, Baysal E, Celenk F, Aytaç I, Durucu C, Kanlikama M, Mumbuç S.

Abstract

OBJECTIVES:

Congenital choanal atresia (CCA) is a very rare abnormality of the nose, but in the case of bilateral presence, it becomes a life-threatening malformation. Various surgical treatment options, such as transpalatal, transseptal, and open rhinoplasty techniques, as well as the transnasal approach, have been defined for the repair of CCA. In this study, the authors intended to evaluate the outcomes of transnasal endoscopic surgery for CCA, and stent implementation's impact on surgical success.

METHODS:

Patients who were admitted to the Otorhinolaryngology Department of Gaziantep University and patients who had not undergone CCA surgery before were included in the study. Patients who underwent transnasal endoscopic choanal atresia surgery (TECAS) were advised to have regular nasal endoscopic examinations performed at check-ups; after a 6-month follow-up period, surgical results were evaluated concerning whether stenosis had occurred or not.

RESULTS:

Of the 48 patients who underwent TECAS after a minimum 6-month follow-up period, 34 of patients revealed no stenosis, so the overall surgical success rate was 70.8%. Fourteen (29.2%) patients who underwent TECAS developed stenosis and required revision surgery.

CONCLUSIONS:

Transnasal endoscopic choanal atresia surgery is the most preferred approach for CCA repair and has many advantages, such as excellent vision, shorter operative time, minimal bleeding, and minimum complication. Despite advances in endovision systems and surgical instruments, stenosis is the most challenging problem after TECAS, so new treatment strategies should be developed to prevent stenosis.

J Craniofac Surg. 2016 Dec 30.

2. Novel Application of Steroid Eluting Stents in Choanal Atresia Repair: A Case Series.

Bangiyev JN1,2, Govil N3, Sheyn A4, Haupert M2,5,6, Thottam PJ7,5,6.

.

Abstract

PURPOSE:

To describe the application of mometasone furoate eluting sinus stent technology in the treatment of choanal atresia (CA) in the hopes of preventing postsurgical stenosis.

METHODS:

We analyzed 3 consecutive patients aged 4 days to 16 years undergoing repair of CA at a tertiary pediatric hospital. Mometasone furoate eluting sinus stents were placed intraoperatively. Postoperative need for revision surgery as well as routine surveillance endoscopy were used to determine success of surgery.

RESULTS:

Three patients of varying age and etiology underwent successful repair of choanal atresia/stenosis. The steroid eluting sinus stent was deployed successfully in all 3 cases. There was no identifiable restenosis in any of the 3 patients with 12-month follow-up. There were no complications noted throughout the follow-up period.

CONCLUSIONS:

Choanal atresia is a rare disorder that can prove difficult in postsurgical management. In our case series, mometasone furoate eluting stents were effective and safe for the management of this disease process. Further prospective studies are needed to determine the exact safety profile, long-term consequences, and efficacy of steroid eluting sinus stents in the pediatric population

Ann Otol Rhinol Laryngol. 2017 Jan;126(1):79-82. Epub 2016 Oct 7

3. Improving Results in Closed Nasal Reduction: A Protocol for Reducing Secondary Deformity.

Farber SJ1, Nguyen DC, Parikh RP, Jang JL, Woo AS.

Abstract

BACKGROUND:

Nasal fractures are the most common facial fracture. Improper reduction is a common occurrence, resulting in a residual deformity that requires secondary surgery. A treatment protocol for nasal fracture management is presented with the aim of reducing secondary deformities requiring corrective surgery.

METHODS:

After institutional review board approval, a retrospective review of all closed nasal reductions performed by a single surgeon between 2006 and 2015 was conducted. Patient age, sex, presence of secondary deformity, and need for a correctional operation were recorded. Clinical records were analyzed for evidence of postoperative deformity and need for subsequent manipulation or surgery.

RESULTS:

A total of 90 patients with nasal bone fractures who underwent closed nasal reduction were identified. The mean age of patients was 24.9 years. The male-to-female ratio was 2.2:1. Postoperative deformity was reported in 14 patients (15.6 percent). Four of the 90 patients (4.4 percent) were found to have avulsion of their upper lateral cartilage from the nasal bone. Nine of the 14 subjects (64.3 percent) presenting with secondary deformity were managed with external manipulation, avoiding a secondary operation. Five patients (5.5 percent) from the original cohort of 90 underwent revision surgery.

CONCLUSIONS:

By using the described protocol to treat nasal fractures, we have seen a low rate of postreduction deformity and a small percentage of need for secondary operation. The overall success rate of closed nasal reduction with postoperative manipulation (when necessary) was identified to be 94.5 percent. Using this protocol, surgeons may see a decrease in secondary deformities following closed nasal reduction procedures.

Plast Reconstr Surg. 2017 Jan;139(1):51-59.

4. Nasal packing in sphenopalatine artery bleeding: therapeutic or harmful?

Sireci F1, Speciale R2, Sorrentino R3, Turri-Zanoni M4, Nicolotti M3, Canevari FR3.

Abstract

The aim of this study is to present our management protocol of sphenopalatine artery bleeding, demonstrating that nasoendoscopic cautery (NC) was a more effective method than the nasal packing, in terms of shorter inpatient stay and reduced complications rate. We present ten posterior epistaxis not resolved by nasal packing. Tabotamp® was placed in the area of sphenopalatine foramen and/or in those parts of the posterior nasal cavity, where it was suspected that bleeding origins. In two cases, the bleeding was resolved in this way, instead eight cases needed of subperiosteal cauterization of sphenopalatine artery by Dessi bipolar forceps (MicroFrance®). 4 of these 8 patients evidenced a remarkable bleeding removing nasal packing (Hb before-nasal packing = 15 ± 0.69 versus Hb after-nasal packing = 13.3 ± 0.81; t student = 2.94; p value = 0.025). These four patients showed a deviation of the nasal septum ipsilateral to epistaxis, and according our experience, a traumatism of sphenopalatine area can be caused by Merocel® nasal packing in this condition. During follow-up, no recurrences of nasal bleeding have been observed in such patients. Nasal packing must be considered if posterior epistaxis is severe, but always taking into account the specific anatomy of patient and in particular septal spurs that can further compromise sphenopalatine artery. In our experience, the endoscopic endonasal cauterization of the sphenopalatine branches represented a safe and effective procedure.

Eur Arch Otorhinolaryngol. 2016 Nov 11.

5. Nasal irrigation with Nasir® in children: a preliminary experience on nasal cytology.

Gelardi M1, Taliente S1, Piccininni K1, Silvestre G2, Quaranta N1, Ciprandi G3.

Abstract

Allergic rhinitis (AR) and upper airway respiratory infections are frequent in children, and both have a relevant impact on some social aspects, including school attendance and performance, sleep, quality of life (also of the parents), and costs. Saline nasal irrigation is widely employed to reduce nasal congestion and mucopurulent secretion, to stimulate cleansing of the nasal and paranasal cavities, and to induce restoration of mucociliary clearance. The present study evaluated the effects of nasal irrigation on nasal cytology, using the new device Nasir® in 66 children (40 males, 26 females, mean age 7.31±1.7 years, age range 4-17 years) with allergic rhinitis. The patients were treated with nasal irrigation with warm (36°C) Nasir® (250 mL sacs of premixed solution): one sac twice daily for 12 days. Nasal irrigation significantly reduced the neutrophilic infiltrate (baseline median value 2.8±0.7; post treatment value 2±0.5; p less than 0.05). In addition, there was a reduction of eosinophil infiltrate (T0= 3.2±1.1; T1= 2.6±1.2; p= less than 0.05). There was no significant change with regard to bacteria (T0= 2.7±0.9; T1= 2.3±1.02; p= 0.17). In conclusion, this pilot study reports that nasal irrigation with Nasir® might be useful to attenuate upper airway inflammation.

J Biol Regul Homeost Agents. 2016 Oct-Dec;30(4):1125-1130.

6. Adenoid Vegetations - Reservoir of Bacteria for Chronic Otitis Media with Effusion and Chronic Rhinosinusitis.

Davcheva-Chakar M, Kaftandzhieva A, Zafirovska B.

Abstract

INTRODUCTION:

Otitis media and rhinosinusitis are commonly encountered illnesses in pediatric population. Literature reports have documented the association between the occurrence of these two conditions and even their almost identical microbiological findings. Until recently, the key factor in the association of these two conditions was considered to be the hypertrophic adenoid tissue, but within the past few years there have been evidences in the literature about the presence of

bacterial biofilms on the adenoids suggesting biofilms to be also responsible for both conditions, chronic otitis media with effusion and chronic rhinosinusitis.

AIM:

The aim of this study was to make a microbiological analysis of the adenoid tissue specimens taken from patients with chronic otitis media with effusion and chronic or recurrent rhinosinusitis and to determine their potential for biofilms formation.

METHODS:

After the surgical intervention, adenoidectomy, microbiological evaluation and analysis of the adenoid tissue specimens taken from 20 patients were made. Having in mind the disease history, chronic otitis media with effusion was diagnosed in all 20 patients and chronic rhinosinusitis in 9 patients.

RESULTS:

The results obtained from the microbiological analyses showed many potentially pathogenic bacteria in the adenoids that were almost identical with the most common organisms incorporated in the etiopathogenesis of both conditions, in chronic otitis media with effusion and in chronic rhinosinusitis. In 7 (35%) patients Haemophylus influenzae was isolated, in 6 (30%) Streptococcus pneumoniae, in 4 (20%) Moraxella catarrhalis, in 2 (10%) patients Staphylococcus aureus and in 1 (5%) patient Streptococcus pyogenes - group A was isolated. One bacterium was isolated from all adenoid vegetations, except in one case when two bacteria (Haemophylus influenzae and Staphylococcus aureus) were concurrently isolated.

CONCLUSION:

Our results have shown that the key role in adenoid vegetations in chronic otitis media with effusion and chronic rhinosinusitis is not only the mechanism of rhinopharyngeal obstruction, but also the presence of bacterial strains with a large potential for formation of biofilms adhered to their surface, especially in cases with symptoms of chronic otitis media with effusion and chronic rhinosinusitis that were resistant to antibiotic therapy

Pril (Makedon Akad Nauk Umet Odd Med Nauki). 2015;36(3):71-6.

7. Invasive fungal sinusitis in the pediatric population: Systematic review with quantitative synthesis of the literature.

Smith A1, Thimmappa V1, Shepherd B2, Ray M3, Sheyn A1, Thompson J4.

Abstract

BACKGROUND:

Invasive fungal sinusitis (IFS) represents an often fatal condition within the pediatric population. In an effort to characterize demographics, treatment modalities, and prognostic factors, we performed a systematic review**.**

METHODS:

We systematically reviewed EMBASE, Medline, TRIPdatabase, SCOPUS and the Cochrane database for invasive fungal nasal and sinus infections limited to individuals <18 years of age. Case series including 3 or more patients were included. Demographics, treatment and outcomes were analyzed using R Gui statistical software.

RESULTS:

Twelve studies met inclusion criteria (103 patients). There was male preponderance of 48.5% with median age of 11 years old. Majority of patients had underlying leukemia (44.6%). Aspergillus was the predominant organism (47%). Isolated nasal findings occurred in 14% of patients and nasal findings occurred in 49% overall. Absolute neutrophil count (ANC) of immunocompromised patients was below 600 in most patients (99%). Average and median length of neutropenia was 2 weeks. All patients were prescribed amphoterocin with 50% as single medicinal therapy. Surgery occurred in 82.8% of cases. The mortality rate was 46%. Univariate analysis identified presenting with facial pain as a negative predictor of overall mortality (OR 0.296, 95% CI: 0.104-0.843, $p < 0.05$).

CONCLUSION:

Mortality remains high in pediatric patients with IFS. An ANC of <600 occurred in the majority of immunocompromised patients at a duration of 2 weeks. Presenting with facial pain was a negative predictor of mortality. Many studies label this condition as invasive fungal sinusitis;

however, approximately one seventh presented with only nasal findings and half overall had nasal involvement

Int J Pediatr Otorhinolaryngol. 2016 Nov;90:231-235.

8. Revision Functional Endoscopic Sinus Surgery.

Levine CG1, Casiano RR2.

Abstract

Refractory chronic rhinosinusitis can be challenging to treat. Initial treatment focuses on medical and nonsurgical treatments. If these treatments fail, revision endoscopic sinus surgery is an option. A plan for revision surgery must address anatomic factors contributing to recurrence. Preoperative imaging and sinonasal endoscopy are systematically reviewed; areas of disease and "danger" zones are identified. Traditional anatomic landmarks are often obscured or absent; thus, a set of consistent landmarks (unchanged despite prior surgery) are used to navigate the revision endoscopic sinus surgery. Wide sinusotomies permit visualization and access to disease intraoperatively. Large sinus openings also facilitate post-operative debridements in clinic, endoscopic disease monitoring, and topical sinus therapy.

Otolaryngol Clin North Am. 2017 Feb;50(1):143-164.

9. The Manangement of the Paranasal Sinus Osteomas.

Arslan HH1, Tasli H, Cebeci S, Gerek M.

Abstract

OBJECTIVE:

Osteoma is the most common benign tumor of the paranasal sinuses. The clinical characteristics and treatment of this disease remain controversial. The aim of this study is to determine the appropriate method of treatment approach according to the features of osteomas.

METHODS:

Forty-one patients with paranasal sinus osteomas were included in the study. According to the location and the size of tumors, patients were followed up or operated. Surgical treatment was

performed via external, endoscopic, or combined approaches for symptomatic patients. Routine physical and radiological evaluations were performed for follow-up in asymptomatic patients.

RESULTS:

Paranasal sinus osteomas were found most common in frontal sinus (n=26, 63.4%) followed by ethmoid sinus (n=10, 24.3%), maxillary sinus (n=4, 9.7%), and sphenoid sinus (n=1, 2.4%). Of the patients with frontal sinus osteomas, the endoscopic approach was performed in 11 patients, external approach (osteoplastic flap) in 9, and combined (external + endoscopic) approach in 5 patients. Endoscopic approach was preferred in all patients with ethmoid osteoma. The combination of Caldwell-Luc procedure and endoscopic approach was performed in 1 patient with maxillary sinus osteoma. In 3 patients, who underwent osteoplastic flap technique, mucocele developed in the postoperative period. Partial loss of vision developed postoperatively in 1 patient with a giant ethmoid osteoma. There were no other complications and recurrence in an average of 29 months follow-up.

CONCLUSION:

Paranasal sinus osteomas are rare, slow-growing benign lesions, with potentially serious complications. Main treatment option for sphenoid and ethmoid sinus and other symptomatic osteomas are surgical resection. Radiographic follow-up is necessary for asymptomatic lesions. Selection of surgical resection method depends on tumor location and size. Patients should be observed for recurrence with periodic examination and imaging techniques. Follow-up should be performed at least in 1-year intervals after the surgery.

J Craniofac Surg. 2017 Jan 5.

10. An update on the current management of head and neck mucosal melanoma.

Green B1, Elhamshary A2, Gomez R3, Rahimi S4, Brennan PA2.

Abstract

Primary mucosal melanomas of the head and neck are rare and aggressive tumours that arise in the nasal cavity, paranasal sinuses and more rarely in the oral cavity. The current treatment options include radical surgical resection with adjuvant external beam radiotherapy being offered in high-risk patients. Although the latter can improve regional control, it does not reduce overall survival. Elective neck dissection is recommended for nodular oral mucosal melanoma, but its

role in the clinically node negative neck is controversial. Systemic therapies including the use of tyrosine kinase inhibitors for tumours with c-KIT mutations are suitable for patients with advanced loco-regional and/or metastatic disease, but current results are variable. Patients with head and neck mucosal melanoma have a poor prognosis due to the high incidence of metastatic disease. This review assesses the latest evidence in the diagnosis and management of primary oral and head and neck mucosal melanoma including details of systemic therapies

Oral Pathol Med. 2016 Nov 19.