PARS Reader's Digest

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

1. Management of congenital choanal atresia (CCA) after multiple failures: A Case Report.

Asma A, Roslenda AR, Suraya A, Saraiza AB, Aini AA.
Universiti Kebangsaan Malaysia Medical Centre, Department of ENT, UKMMC, Jalan Yaacob Latiff, 56000, Bandar Tun Razak, Kuala Lumpur, Wilayah Persekutuan, Malaysia. asmaent@yahoo.com

Abstract

Nasal obstruction in neonates is a potentially fatal condition because neonates are obligatory nasal breathers. Bilateral choanal atresia is therefore a neonatal emergency. Several approaches for corrections of choanal atresia are available including the helium laser: YAG. A 5-year-old Chinese girl born with bilateral choanal atresia, had birth asphyxia that required intubation. She underwent multiple surgeries for correction of choanal atresia at other hospitals but failed to improve. She was referred to Universiti Kebangsaan Malaysia Medical Center (UKMMC) after presenting with intermittent respiratory distress and cyanosis following an upper respiratory tract infection. A repeat computed tomography (CT) scan done preoperatively showed complete bony stenosis over the left choana and finding was confirmed by examination under general anesthesia. She underwent endoscopic transnasal removal of left bony atretic plate. There was no intra or postoperative complications. During follow up 10 years later, the airway on both sides remains patent.

Med J Malaysia. 2013 Feb;68(1):76-8

2. Clinical assessment is an accurate predictor of which patients will need septoplasty.

Sedaghat AR, Busaba NY, Cunningham MJ, Kieff DA.
Department of Otolaryngology, Massachusetts Eye and Ear Infirmary, Boston, Massachusetts 02114, USA. ahmad_sedaghat@meei.harvard.edu

Abstract

OBJECTIVES/HYPOTHESIS:

Septoplasty is a frequently performed surgical procedure with the most common indication being nasal airway obstruction. Almost universally, health insurance companies mandate a trial of medical therapy consisting of intranasal corticosteroids prior to performance of septoplasty regardless of clinical assessment. Evidence for this requirement is lacking. We sought to evaluate the initial clinical assessment as a predictor of response to this mandated trial of medical treatment.

STUDY DESIGN:

Retrospective review of prospectively collected data on 137 consecutive patients who presented with symptoms of nasal obstruction and a deviated nasal septum on physical examination.

METHODS:

Patients were placed into one of three cohorts based on prediction of 1) failure of medical therapy with subsequent septoplasty, 2) success of medical therapy without subsequent septoplasty, or 3) unable to make a prediction. Patients from each cohort were assessed for subsequent response to medical therapy and ultimate need for septoplasty.

RESULTS:

Overall clinical assessment had a sensitivity of 86.9%, specificity of 91.8%, positive predictive value of 93.6%, and negative predictive value of 96.4% for detecting/predicting need for septoplasty. The accuracy of the overall clinical assessment is considerably better than severe deviation at any one septal anatomical site. Of patients whose response to medical therapy could not be predicted, 61.3% failed medical therapy and needed surgery; this is statistically equivalent to a 50/50 distribution between either needing septoplasty or not.

CONCLUSIONS:

Clinical assessment at initial presentation of patients with nasal obstruction and deviated septum is highly accurate in predicting which patients will need septoplasty.

Laryngoscope. 2013 Jan;123(1):48-52

3. Septal stapler use during septum surgery.

Yıldırım G, Cingi C, Kaya E.
Okmeydani Education and Research Hospital, Istanbul, Turkey

Abstract

Although discussions regarding nasal packing are still ongoing, to eliminate any possible complications, surgeons have used nasal packing for many years. Septoplasty is one of the most frequently performed operations by head and neck surgeons. Any methods to diminish the surgical time or bring comfort to the surgeon will be well appreciated. In this study, we attempted to demonstrate the usefulness of the stapler method by comparing preoperative and postoperative results from the visual analog scale (VAS), nasal obstruction symptom evaluation (NOSE), rhinosinusitis quality of life questionnaire (RQLQ), and acoustic rhinomanometry values. In addition, we evaluated pain scores, postoperative complications, and

breathing after nasal packing, stapling, and trans-septal suturing techniques. Patients were divided into three groups. In the first group, deviated cartilage was removed or repositioned and mucoperichondrial flaps were closed with a bioresorbable stapler after septoplasty. Four or five staples were placed on the septum. In the second group, the septum was sutured continuously with 4/0 Pegelak (Doğsan TR). In the third group, Merocel packs were used without any sutures and were kept for 48 h. Nasal packing leads to patient discomfort after septal surgery; however, there is no difference in patient comfort between closing the mucoperichondrial flaps by suturing the septum or using a stapler. After surgery, there were no differences between the groups in terms of successful breathing. This situation was assessed by endoscopic examination and acoustic rhinomanometry. Thus, there was no objective or subjective difference. Stapling increases the doctor's comfort level and surgical time is optimized. Although experienced surgeons can easily suture the septum, less experienced ones have some difficulty; therefore, stapling may provide more benefit to the latter. Further, four staples are sufficient to close the septum.

Eur Arch Otorhinolaryngol. 2013 Mar;270(3):939-43.

4. **Cost-effectiveness of endoscopic sphenopalatine artery ligation versus nasal packing as first-line treatment for posterior epistaxis.**

Dedhia RC, Desai SS, Smith KJ, Lee S, Schaitkin BM, Snyderman CH, Wang EW. Department of Otolaryngology, University of Pittsburgh School of Medicine, Pittsburgh, PA.

Abstract

BACKGROUND:

The advent of endoscopic sphenopalatine artery ligation (ESPAL) for the control of posterior epistaxis provides an effective, low-morbidity treatment option. In the current practice algorithm, ESPAL is pursued after

failure of posterior packing. Given the morbidity and limited effectiveness of posterior packing, we sought to determine the cost-effectiveness of first-line ESPAL compared to the current practice model.

METHODS:

A standard decision analysis model was constructed comparing first-line ESPAL and current practice algorithms. A literature search was performed to determine event probabilities and published Medicare data largely provided cost parameters. The primary outcomes were cost of treatment and resolution of epistaxis. One-way sensitivity analysis was performed for key parameters.

RESULTS:

Costs for the first-line ESPAL arm and the current practice arm were $6450 and $8246, respectively. One-way sensitivity analyses were performed for key variables including duration of packing. The baseline difference of $1796 in favor of the first-line ESPAL arm was increased to $6263 when the duration of nasal packing was increased from 3 to 5 days. Current practice was favored (cost savings of $437 per patient) if posterior packing duration was decreased from 3 to 2 days.

CONCLUSION:

This study demonstrates that ESPAL is cost-saving as first-line therapy for posterior epistaxis. Given the improved effectiveness and patient comfort of ESPAL compared to posterior packing, ESPAL should be offered as an

initial treatment option for medically stable patients with posterior epistaxis.

Int Forum Allergy Rhinol. 2013 Jan 10

5. Diagnostics of nasal bone fractures with the use of ultrasound study techniques.

Kunitskiĭ VS, Semenov SA.
Source
1. Kafedra otorinolaringologii Vitebskogo gosudarstvennogo meditsinskogo universiteta;
2. Otdelenie otorinolaringologii Vitebskoĭ oblastnoĭ klinicheskoĭ bol'nitsy, Respublika Belarus'

Abstract

The objective of the present study was to estimate the effectiveness of ultrasound diagnostics of nasal bone fractures, compare it with the results of clinical examination, X-ray and CT imaging of nasal bones. The data of the analysis of clinical symptoms and instrumental studies are compared with those of X-ray and ultrasound investigations of intact and fractured bones including the cases of persistent post-traumatic deformation of the nose. It is concluded that the ultrasonic study of nasal bones is a more accurate method for diagnostics of their fractures compared with X-ray examination ($p<0.05$); specifically, it allowed the lateral displacement of bone fragments to be documented.

Vestn Otorinolaringol. 2013;(1):72-76

6. Management of rhinitis: allergic and non-allergic.

Tran NP, Vickery J, Blaiss MS.
LeBonheur Children's Medical Center, Memphis, TN, USA

Abstract

RHINITIS IS A GLOBAL PROBLEM AND IS DEFINED AS THE PRESENCE OF AT LEAST ONE OF THE FOLLOWING: congestion, rhinorrhea, sneezing, nasal itching, and nasal obstruction. The two major classifications are allergic and nonallergic rhinitis (NAR). Allergic rhinitis occurs when an allergen is the trigger for the nasal symptoms. NAR is when obstruction and rhinorrhea occurs in relation to nonallergic, noninfectious triggers such as change in

the weather, exposure to caustic odors or cigarette smoke, barometric pressure differences, etc. There is a lack of concomitant allergic disease, determined by negative skin prick test for relevant allergens and/or negative allergen-specific antibody tests. Both are highly prevalent diseases that have a significant economic burden on society and negative impact on patient quality of life. Treatment of allergic rhinitis includes allergen avoidance, antihistamines (oral and intranasal), intranasal corticosteroids, intranasal cromones, leukotriene receptor antagonists, and immunotherapy. Occasional systemic corticosteroids and decongestants (oral and topical) are also used. NAR has 8 major subtypes which includes nonallergic rhinopathy (previously known as vasomotor rhinitis), nonallergic rhinitis with eosinophilia, atrophic rhinitis, senile rhinitis, gustatory rhinitis, drug-induced rhinitis, hormonal-induced rhinitis, and cerebral spinal fluid leak. The mainstay of treatment for NAR are intranasal corticosteroids. Topical antihistamines have also been found to be efficacious. Topical anticholinergics such as ipratropium bromide (0.03%) nasal spray are effective in treating rhinorrhea symptoms. Adjunct therapy includes decongestants and nasal saline. Investigational therapies in the treatment of NAR discussed include capsaicin, silver nitrate, and acupuncture

Allergy Asthma Immunol Res. 2011 Jul;3(3):148-56

7. Balloon dilation technology: let the truth be told.

Catalano PJ.
St. Elizabeth's Medical Center, 736 Cambridge Street, SMC 8th Floor, Brighton, MA, 02135, USA, Peter.catalano@steward.org.

Abstract

Balloon dilation technology (BDT), also known as balloon sinuplasty, has been in clinical use since September, 2005. Prior to BDT, surgeons performed a procedure called FESS, or functional endoscopic sinus surgery, for patients with chronic sinusitis. As is true with any new technology or procedure in medicine, a debate often ensues between early adopters and

mainstream practitioners. Over the past 7 years, much has been discussed, debated, and learned about BDT. What follows is a review of the origins of the BDT: the theory, technology, indications and applications; and a review of the pertinent outcomes literature. Independent of how one feels about BDT, the evidence strongly supports its safety, efficacy, and growing popularity among patients and physicians alike.

Curr Allergy Asthma Rep. 2013 Apr;13(2):250-4.

8. Subclassification of chronic rhinosinusitis.

Han JK.
Division of Rhinology and Endoscopic Sinus and Skull Base Surgery, Department of Otolaryngology-Head and Neck Surgery, Eastern Virginia Medical School, Norfolk, Virginia, U.S.A

Abstract

OBJECTIVES/HYPOTHESIS:

There are variants of chronic rhinosinusitis (CRS). Therefore, the objectives of this study were to phenotype the subclasses of CRS as well as characterize their polyps with histology and cellular-intracellular biomarkers.

STUDY DESIGN:

Prospective case-control study.

METHODS:

Demographic data, quality-of-life (QoL) questionnaires, nasal endoscopy (NE), and computed tomography (CT) scores were obtained. CRS was divided into seven subclasses: aspirin-exacerbated respiratory disease (AERD), asthmatic sinusitis with and without allergy, nonasthmatic sinusitis with and without allergy, allergic fungal sinusitis (AFS), and cystic fibrosis (CF). Histopathologic and immunohistochemistry of nasal polyps were

recorded. CD3, CD4, CD8, CD19, CD45, and CD56 data were collected. Interleukin (IL)4, IL5, IL13, IL17, and interferon (IFN)-γ were measured.

RESULTS:

Eight-four subjects were in this study. Two QoL questionnaires were inadequate at distinguishing the control group from CRS. NE and CT were able to differentiate between the control group and all CRS subclasses (P<.01). Asthmatic sinusitis, AERD, and AFS had high NE and CT scores, nasal polyps, eosinophils, mast cell, and hypercellularity. Asthmatic sinusitis, nonasthmatic sinusitis, and AERD had higher CD4 cells than control group (P<.05). Even though asthmatic sinusitis and AFS are mediated by Th2, AFS had differing levels of Th2 cytokines. Each nonasthmatic sinusitis had purulence and low CT score. Each nonasthmatic sinusitis had higher CD4 cells and IFN-γ than control (P<.05). CF is associated with purulence, high CT score, high polymorphonuclear leukocytes, high plasma cells, and high mast cells.

CONCLUSIONS:

Well-characterized and distinct groups of CRS have been defined for targeted treatment and research studies.

Laryngoscope. 2013 Mar;123 Suppl 2:S15-27

9. **Juvenile nasopharyngeal angiofibroma: A Systematic Review and Comparison of Endoscopic, Endoscopic-Assisted, and Open Resection in 1047 Cases.**

Boghani Z, Husain Q, Kanumuri VV, Khan MN, Sangvhi S, Liu JK, Eloy JA. Department of Neurological Surgery, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, Newark, New Jersey, U.S.A

Abstract

OBJECTIVES/HYPOTHESIS:

This study is a review of the treatment outcomes of juvenile nasopharyngeal angiofibroma (JNA) specifically comparing endoscopic, endoscopic-assisted, and open surgical approaches.

STUDY DESIGN:

Systematic review of studies using the MEDLINE database.

METHODS:

A systematic review of studies on JNA from 1990 to 2012 was conducted. A search for articles related to JNA, along with bibliographies of those articles, was performed. Articles were examined for individual patient data (IPD) and aggregate patient data (APD). Demographics, presenting symptoms, surgical approach, follow-up, and outcome were analyzed.

RESULTS:

Eighty-five articles were included, with IPD reported in 57 articles (345 cases) and APD in 28 articles (702 cases). For the IPD cohort, average follow-up was 33.4 months (range, 0.5-264 months). Average blood loss was 544.0 mL, 490.0 mL, and 1579.5 mL for endoscopic, endoscopic-assisted, and open surgical cases, respectively ($P < .05$). Recurrence rate following endoscopic surgery and open surgery were significantly less than endoscopic-assisted surgery ($P < .05$). In the APD cohort, the recurrence rate following endoscopic surgery was 4.7% compared to 20.6% in the endoscopic-assisted group and 22.6% in the open surgery group ($P < .05$). Among studies that reported Radkowski/Sessions grading, there was no significant difference in recurrence rates for both the IPD and APD cohorts across each stage between open and endoscopic surgery ($P > .05$).

CONCLUSIONS:

In this study, endoscopic resection had a significantly lower intraoperative blood loss and lower recurrence rate when compared to open resection. However, there was no difference in recurrence rate when analyzing the IPD and controlling for Radkowski/Sessions grading. Therefore, further large-scale studies may be required to fully elucidate treatment options.

Laryngoscope. 2013 Apr;123(4):859-69

10. Confocal laser endomicroscopy in head and neck cancer: steps forward?

Volgger V, Conderman C, Betz CS.

aDepartment of Otorhinolaryngology, Head & Neck Surgery, Klinikum der Universität München, Munich, Germany bDepartment of Otolaryngology, Head & Neck Surgery, University of California - Irvine Medical Center, Irvine, California, USA

Abstract

PURPOSE OF REVIEW:

Confocal laser endomicroscopy (CLE) is a novel, noninvasive technique used to obtain microanatomical images of the inner lining of hollow organs. It has been used in a variety of clinical specialties to aid in the diagnosis and treatment planning of inflammatory and neoplastic processes. Our intent is to provide an up-to-date review of the literature in the setting of head and neck diseases as well as describing our own initial results and areas of future research.

RECENT FINDINGS:

With increasing experience using CLE in the upper aerodigestive tract (UADT), evidence is mounting that this method can be a useful adjunct to standard endoscopy and other diagnostic techniques. Recent publications have shown that by using CLE, microanatomical structures of healthy and

diseased mucosa can easily be identified, allowing for a differentiation of dysplastic/neoplastic and benign mucosal lesions. Standardized diagnostic protocols as well as clinically relevant classification systems for the UADT have not yet been described.

SUMMARY:

CLE is an imaging modality that allows real-time visualization of mucosal cellular architecture and other histologic characteristics. First reports on its use in the UADT have yielded promising results, but the true value of this method is yet to be determined.

Curr Opin Otolaryngol Head Neck Surg. 2013 Apr;21(2):164-70