Pan Arab Rhinology Society
PARS Reader's Digest

Reader Digest

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

1. Pediatric Nasal Obstruction.

Smith MM1, Ishman SL2.

Abstract

Nasal obstruction is one of the most common problems seen by pediatric otolaryngologists. Prompt treatment of nasal obstruction can be critical in newborns and infants because of their obligatory nasal breathing. Older children will typically have more inflammatory, infectious, or traumatic causes of nasal obstruction. Nasal obstruction can lead to a significant decrease in the quality of life in children along with an increase health care expenditures

Otolaryngol Clin North Am. 2018 Jul 18.

2. Refinement treatment of nasal bone fracture: A 6-year study of 329 patients.

Chou C[1], Chen CW[2], Wu YC[1], Chen KK[1], Lee SS[3].

Abstract

BACKGROUND:

The reliability of X-ray radiography for diagnosing nasal bone fractures (NBFs) remains controversial. Recent studies show that, for determining the orientation and location of the displaced/depressed fracture, nasal sonography is as accurate as facial computed tomography. This retrospective study compared conductor-assisted nasal sonography (CANS) to conventional diagnostic tools and reported subjective patient satisfaction and discomfort after closed reduction combined with tube technique.

METHODS:

This retrospective study reports the results of 329 refinement treatments for nasal bone fracture (including 199 men and 130 women) performed from 2005 to 2011. All patients were assessed with CANS and completed a survey immediately prior to removing the packing. Questionnaires were adapted from the nasal obstruction symptom evaluation (NOSE) scale.

RESULTS:

The study found that CANS has a 97.2% rate of accuracy in diagnosing NBF. The visual analog scale scores of nasal obstruction, nasal congestion, sleep disturbance, trouble breathing, and inability to move air through the nose were analyzed. The experimental group scores were significantly different from the control group for all scores ($p < 0.001$).

CONCLUSION:

Compared to conventional methods, CANS is more accurate for detecting NBF. We recommend its use as an alternative tool for diagnosing a nasal fracture. Because the tube technique balances pressure between the nasopharynx and middle ear during swallowing, patient comfort is enhanced. Application of these modifications can improve accuracy in diagnosing NBF and can improve the quality of NBF treatment

Asian J Surg. 2015 Oct;38(4):191-8.

3. Breaking paradigms in severe epistaxis: the importance of looking for the S-point.

Kosugi EM1, Balsalobre L2, Mangussi-Gomes J2, Tepedino MS3, San-da-Silva DM4, Cabernite EM4, Hermann D5, Stamm AC5.

Abstract

INTRODUCTION:

Since the introduction of nasal endoscopy into the field of Otorhinolaryngology, the treatment paradigm for cases of severe epistaxis has shifted toward early and precise identification of the bleeding site. Although severe epistaxis is usually considered to arise from posterior bleeding, an arterial vascular pedicle in the superior portion of the nasal septum, around the axilla projection of the middle turbinate, posterior to the septal body, frequently has been observed. That vascular pedicle was named the Stamm's S-point.

OBJECTIVE:

The aim of this study was to describe the S-point and report cases of severe epistaxis originating from it.

METHODS:

A retrospective case series study was conducted. Nine patients with spontaneous severe epistaxis, where the S-point was identified as the source of bleeding, were treated between March 2016 and March 2017.

RESULTS:

Male predominance (77.8%) with age average of 59.3 years old were reported. Most cases presented comorbidities (88.9%) and were not taking acetylsalicylic acid (66.7%). A predominance of left sided involvement (55.6%) and anteroposterior bleeding being the principal initial presentation (77.8%) was seen. Six patients (66.7%) presented with hemoglobin levels below 10g/dL, and four (44.4%) required blood transfusion. Cauterization of S-point was performed in all patients, with complete resolution of bleeding. No patient experienced recurrence of severe epistaxis.

CONCLUSION:

The Stamm's S-point, a novel source of spontaneous severe epistaxis, is reported, and its cauterization was effective and safe. Otolaryngologists must actively seek this site of bleeding in cases of severe epistaxis.

Braz J Otorhinolaryngol. 2018 May - Jun;84(3):290-297

4. Saline irrigation for allergic rhinitis.

Head K1, Snidvongs K, Glew S, Scadding G, Schilder AG, Philpott C, Hopkins C.

Abstract

BACKGROUND:

Allergic rhinitis is a common condition affecting both adults and children. Patients experience symptoms of nasal obstruction, rhinorrhoea, sneezing and nasal itching, which may affect their quality of life.Nasal irrigation with saline (salty water), also known as nasal douching, washing or lavage, is a procedure that rinses the nasal cavity with isotonic or hypertonic saline solutions. It can be performed with low positive pressure from a spray, pump or squirt bottle, with a nebuliser or with gravity-based pressure in which the person instils saline into one nostril and allows it to drain out of the other. Saline solutions are available over the counter and can be used alone or as an adjunct to other therapies.

OBJECTIVES:

To evaluate the effects of nasal saline irrigation in people with allergic rhinitis.

SEARCH METHODS:

The Cochrane ENT Information Specialist searched the ENT Trials Register; CENTRAL; Ovid MEDLINE; Ovid Embase; CINAHL; Web of Science; ClinicalTrials.gov; ICTRP and additional sources for published and unpublished trials. The date of the search was 23 November 2017.

SELECTION CRITERIA:

Randomised controlled trials (RCTs) comparing nasal saline irrigation, delivered by any means and with any volume, tonicity and alkalinity, with (a) no nasal saline irrigation or (b) other pharmacological treatments in adults and children with allergic rhinitis. We included studies comparing nasal saline versus no saline, where all participants also received pharmacological treatment (intranasal corticosteroids or oral antihistamines).

DATA COLLECTION AND ANALYSIS:

We used the standard methodological procedures expected by Cochrane. Primary outcomes were patient-reported disease severity and a common adverse effect - epistaxis. Secondary outcomes were disease-specific health-related quality of life (HRQL), individual symptom scores, general HRQL, the adverse effects of local irritation or discomfort, ear symptoms (pain or pressure) and nasal endoscopy scores. We used GRADE to assess the quality of the evidence for each outcome; this is indicated in italics.

MAIN RESULTS:

We included 14 studies (747 participants). The studies included children (seven studies, 499 participants) and adults (seven studies, 248 participants). No studies reported outcomes beyond three months follow-up. Saline volumes ranged from 'very low' to 'high' volume. Where stated, studies used either hypertonic or isotonic saline solution.Nasal saline versus no saline treatmentAll seven studies (112 adults; 332 children) evaluating this comparison used different scoring systems for patient-reported disease severity, so we pooled the data using the standardised mean difference (SMD). Saline irrigation may improve patient-reported disease severity compared with no saline at up to four weeks (SMD -1.32, 95% confidence interval (CI) -1.84 to -0.81; 407 participants; 6 studies; low quality) and between four weeks and three months (SMD -1.44, 95% CI -2.39 to -0.48; 167 participants; 5 studies; low quality). Although the evidence was low quality the SMD values at both time points are considered large effect sizes. Subgroup analysis showed the improvement in both adults and children. Subgroup analyses for volume and tonicity were inconclusive due to heterogeneity.Two studies reported methods for recording adverse effects and five studies mentioned them. Two studies (240 children) reported no adverse effects (epistaxis or local discomfort) in either group and three only reported no adverse effects in the saline group.One study (48 children) reported disease-specific HRQL using a modified RCQ-36 scale. It was uncertain whether there was a difference between the groups at any of the specified time points (very low quality). No other secondary outcomes were reported.Nasal saline versus no saline with adjuvant use of intranasal steroids or oral antihistamines Three studies (40 adults; 79 children) compared saline with intranasal steroids versus intranasal steroids alone; one study (14 adults) compared saline with oral antihistamines versus oral antihistamines alone. It is uncertain if there is a difference in patient-reported disease severity at up to four weeks (SMD -0.60, 95% CI -1.34 to 0.15; 32 participants; 2 studies; very low quality) or from four weeks to three months (SMD -0.32, 95% CI -0.85 to 0.21; 58

participants; 2 studies; very low quality). Although none of the studies reported methods for recording adverse effects, three mentioned them: one study (40 adults; adjuvant intranasal steroids) reported no adverse effects (epistaxis or local discomfort) in either group; the other two only reported no adverse effects in the saline group.It is uncertain if saline irrigation in addition to pharmacological treatment improved disease-specific HRQL at four weeks to three months, compared with pharmacological treatment alone (SMD -1.26, 95% CI -2.47 to -0.05; 54 participants; 2 studies; very low quality). No other secondary outcomes were reported.Nasal saline versus intranasal steroidsIt is uncertain if there was a difference in patient-reported disease severity between nasal saline and intranasal steroids at up to four weeks (MD 1.06, 95% CI -1.65 to 3.77; 14 participants; 1 study), or between four weeks and three months (SMD 1.26, 95% CI -0.92 to 3.43; 97 participants; 3 studies), or indisease-specific HRQL between four weeks and three months (SMD 0.01, 95% CI -0.73 to 0.75; 83 participants; 2 studies). Only one study reported methods for recording adverse effects although three studies mentioned them. One (21 participants) reported two withdrawals due to adverse effects but did not describe these or state which group. Three studies reported no adverse effects (epistaxis or local discomfort) with saline, although one study reported that 27% of participants experienced local discomfort with steroid use. No other secondary outcomes were reported.

AUTHORS' CONCLUSIONS:

Saline irrigation may reduce patient-reported disease severity compared with no saline irrigation at up to three months in both adults and children with allergic rhinitis, with no reported adverse effects. No data were available for any outcomes beyond three months. The overall quality of evidence was low or very low. The included studies were generally small and used a range of different outcome measures to report disease severity scores, with unclear validation. This review did not include direct comparisons of saline types (e.g. different volume, tonicity).Since saline irrigation could provide a cheap, safe and acceptable alternative to intranasal steroids and antihistamines further high-quality, adequately powered research in this area is warranted

Cochrane Database Syst Rev. 2018 Jun 22;6:CD012597.

5. Balloon Catheter Dilation of the Sinuses: A 2011-2014 MarketScan Analysis.

Jang DW1, Abraham C2, Cyr DD2, Schulz K1, Abi Hachem R1, Witsell DL1.

Abstract

Objective This study uses a large national claims-based database to analyze recent practice patterns related to balloon catheter dilation (BCD) of the sinuses. Study Design Retrospective study. Setting Academic. Subjects and Methods Patients with chronic rhinosinusitis (CRS) undergoing BCD and functional endoscopic sinus surgery (FESS) from

2011 to 2014 were identified in Truven Health MarketScan Databases with codes from the International Classification of Diseases, Ninth Revision, Clinical Modification and Current Procedural Terminology, Fourth Edition. Prevalence of CRS and frequency of sinus procedures were trended over the study period. Information related to site of service, demographics, and comorbidities was analyzed. Results Although the prevalence of CRS and sinus procedures remained stable over the study period, there was a consistent increase in the annual number of BCD procedures performed in the office. Among BCD procedures, multisinus dilation had the largest increase. A higher proportion of patients undergoing BCD were women, aged ≥65 years, and from the South. There was a higher prevalence of headache disorder and allergic rhinitis in the BCD group, as compared with the FESS and hybrid groups. Conclusion BCD, especially in the office, has risen in popularity since the introduction of Current Procedural Terminology codes in 2011. This study reveals significant differences in demographics and comorbidities between patients undergoing BCD and those undergoing FESS. Such disparities may highlight the need for better-defined indications for use of this technology.

Otolaryngol Head Neck Surg. 2018 Aug 7:194599818791811.

6. Spontaneous nasal cerebrospinal fluid leaks: management of 24 patients over 11 years.

Englhard AS1, Volgger V2, Leunig A3, Meßmer CS2, Ledderose GJ2,3.

Abstract

PURPOSE:

Most cases of non-traumatic nasal cerebrospinal fluid (CSF) leaks occur spontaneously without any obvious reason. Severe and life-threatening complications are possible consequences. Endoscopic repair is considered the gold standard; however, diagnosis and therapy of these CSF leaks stay challenging.

METHODS:

In this retrospective analysis, patients who presented with spontaneous nasal CSF leaks from 2006 to 2017 were included. Symptoms, diagnostics, localization of the skull base defect, surgical method, outcome, and postoperative treatment were recorded.

RESULTS:

Twenty four patients were included. 8 patients presented with symptoms of meningitis. The skull base defects were most commonly located in the anterior ethmoid roof-especially in the cribriform plate-and in the lateral part of the sphenoid sinus. 21 patients had a BMI above 25. In only 13 cases the defect could be detected preoperatively via computed tomography or additional magnetic resonance imaging. In all patients intraoperative visualization of the CSF leak was possible using intrathecal application of sodium-fluorescein. Endoscopic repair was the initial surgical method for all patients and proved to be successful in 80% of the cases. In most cases surgical revision was performed endoscopically; however, in two patients an open transpterygoidal approach was necessary.

CONCLUSIONS:

Spontaneous nasal CSF leaks often initially present with symptomatic meningitis. Imaging does not always clearly identify the skull base defect. Common localizations are the anterior ethmoid roof and the lateral sphenoid sinus. Obesity seems to be a predisposing factor. In most cases, endoscopic repair with low morbidity is possible; however, an individualized approach is necessary

Eur Arch Otorhinolaryngol. 2018 Aug 14.i

7. Head trauma and olfactory function.

Howell J1, Costanzo RM2,1, Reiter ER1,2.

Abstract

Olfactory impairment is a well-established sequela of head injury. The presence and degree of olfactory dysfunction is dependent on severity of head trauma, duration of posttraumatic amnesia, injuries obtained, and as more recently established, age. Deficits in smell can be conductive or neurosensory, contingent on location of injury. The former may be amenable to medical or surgical treatment, whereas the majority of patients with neurosensory deficits will not recover. Many patients will not seek treatment for such deficits until days, weeks, or even months after the traumatic event due to focus on more pressing injuries. Evaluation should start with a comprehensive history and physical exam. Determination of the site of injury can be aided by CT and MRI scanning. Verification of the presence of olfactory deficit, and assessment of its severity requires objective olfactory testing, which can be accomplished with a number of methods. The prognosis of posttraumatic olfactory dysfunction is unfortunate, with approximately only one third improving. Emphasis must be placed on identification of reversible causes, such as nasal bone fractures, septal deviation, or mucosal edema/hematoma. Olfactory loss is often discounted as an annoyance, rather than a major health concern by both patients and many healthcare providers. Patients with olfactory impairment have diminished quality of life, decreased satisfaction with life, and increased risk for personal injury.

Paramount to the management of these patients is counseling with regard to adoption of compensatory strategies to avoid safety risks and maximize quality of life. Practicing otolaryngologists should have a thorough understanding of the mechanisms of traumatic olfactory dysfunction in order to effectively diagnose, manage, and counsel affected patients.

World J Otorhinolaryngol Head Neck Surg. 2018 Mar 14;4(1):39-45.

8. Infratemporal fossa tumors: When to suspect a malignant tumor? A retrospective cohort study of 62 cases.

Lisan Q1, Leclerc N2, Kania R2, Guichard JP3, Herman P2, Verillaud B2.

Abstract

OBJECTIVES:

Infratemporal fossa (ITF) tumors are rare and little is known about their general epidemiology, making it sometimes difficult for clinicians, who seldom encounter them, to distinguish between benign and malignant forms on the basis of the initial clinical and radiological work-up alone. The objectives of this retrospective study were: (i) to determine the respective prevalences of the various histologic types of ITF tumor, and (ii) to assess associations between certain clinical and radiological features and malignancy.

METHODS:

A single-center observational study in a university hospital included all new consecutive cases of ITF tumor treated from January 2000 to December 2016. Histologic type, demographics, clinical presentation and imaging findings were analyzed.

RESULTS:

In total, 62 patients were included. 74% of tumors were benign (n=46) and 26% malignant. Juvenile nasopharyngeal angiofibroma, adenoid cystic carcinoma and schwannoma were the most frequent histologic types, accounting for 47%, 16% and 10% of cases, respectively. The only clinical or imaging signs significantly associated with malignancy were trismus, facial pain, facial hypoesthesia and neural invasion on magnetic resonance imaging (all P-values<0.05).

CONCLUSION:

This study provides general epidemiological data on ITF tumors, and identified several clinical and radiologic signs to help clinicians suspect malignancy

Eur Ann Otorhinolaryngol Head Neck Dis. 2018 Jul 10.

9. Raman Spectroscopy for Inverted Papilloma: A Proof-of-Concept Study.

Mascarella MA1, Alrasheed A1,2, Fnais N1,2, Gourgas O3, Jalani G3, Cerruti M3, Tewfik MA1.

Abstract

Inverted papillomas are tumors of the sinonasal tract with a propensity to recur. Raman spectroscopy can potentially identify inverted papillomas from other tissue based on biochemical signatures. A pilot study comparing Raman spectroscopy to histopathology for 3 types of sinonasal tissue was performed. Spectral data of biopsies from patients with normal sinonasal mucosa, chronic rhinosinusitis, and inverted papillomas are compared to histopathology using principal component analysis and linear discriminant analysis after data preprocessing. A total of 18 normal, 15 chronic rhinosinusitis, and 18 inverted papilloma specimens were evaluated. The model distinguished normal sinonasal mucosa, chronic rhinosinusitis, and inverted papilloma tissue with an overall accuracy of 90.2% (95% confidence interval, 0.86-0.94). In conclusion, Raman spectroscopy can distinguish inverted papilloma, normal sinonasal mucosa, and chronically rhinosinusitis tissue with acceptable accuracy

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10. Survey of endoscopic skull base surgery practice patterns among otolaryngologists.

Wannemuehler TJ1, Rabbani CC1, Burgeson JE1, Illing EA1, Walgama ES2, Wu AW2, Ting JY1.

Abstract

Background:

Endoscopic skull base surgery (ESBS) is a rapidly expanding field. Despite divergent reported preferences for reconstructive techniques and perioperative management, limited data exist regarding contemporary practice patterns among otolaryngologists performing ESBS. This study aims to elucidate current practice patterns, primarily the volumes of cases performed and secondarily a variety of other perioperative preferences.

Methods:

An anonymous 32-item electronic survey examining perioperative ESBS preferences was distributed to the American Rhinologic Society membership. Statistical significance between variables was determined utilizing Student t, chi-square, and Fisher exact tests.

Results:

Seventy otolaryngologists completed the survey. The effective response rate was approximately 22.5%. Sixty percent of respondents were in full-time academic practice and 70% had completed rhinology/skull base fellowships. Annually, 43.3 mean ESBS cases were performed (29.1 private practice vs. 52.9 academic practice, $P = .009$). Academic practice averaged 24.1 expanded cases versus only 11 in private practice ($P = .01$). Of respondents, 55.7% stood on the same side as the neurosurgeon and 72.9% remained present for the entire case. Current procedural terminology coding and antibiotic regimens were widely divergent; 31.4% never placed lumbar drains preoperatively, while 41.4% did so for anticipated high-flow cerebrospinal fluid leaks. While considerable variation in reconstructive techniques were noted, intradural defect repairs utilized vascularized flaps 86.3% of the time versus only 51.3% for extradural repairs ($P < 0.001$). Major complications were rare. Postoperative restrictions varied considerably, with most activity limitations between 2-8 weeks and positive airway pressure use for 2-6 weeks. Most respondents started saline irrigations 0-2 weeks postoperatively.

Conclusions:

Based on responses from fellowship- and non-fellowship-trained otolaryngologists in various practice settings, there remains considerable variation in the perioperative management of patients undergoing ESBS

Laryngoscope Investig Otolaryngol. 2018 Apr 16;3(3):143-155.