Pan Arab Rhinology Society
PARS Reader's Digest

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

1. Bilateral sinonasal polyposis in a patient with unilateral choanal atresia.

Lee B, Patel N, Ferguson BJ.
Department of Otolaryngology-Head and Neck Surgery, McLaren-Oakland, Pontiac, Michigan, USA. brianleedo@gmail.com

Abstract

Sinonasal polyposis is a disorder of hyperplastic mucosal inflammation that subsequently leads to the development of smooth, pale, non-neoplastic masses. The theories on its pathogenesis are diverse and remain debated within the medical community. A distinct, widely accepted, and unifying theory is absent, and probably unrealistic given the varying possible causes. The case reported here, which demonstrates nasal polyp formation within an atretic nasal cavity, suggests that nasal airflow or aerodynamics may have little to no effect on its etiology. It also seems to provide evidence that at least in some individuals nasal polyps appear to be due to an inflammatory disorder independent of inhalant allergen challenge.

Laryngoscope. 2013 Mar;123(3):574-6

2. Endoscopic expanded endonasal approach: preliminary experience with the new 3D endoscope.

Felisati G, Lenzi R, Pipolo C, Maccari A, Messina F, Revay M, Lania A, Cardia A, Lasio G.

Unit of Otorhinolaryngology, Head and Neck Department, San Paolo Hospital, University of Milan, Italy

Abstract

In English, Italian

La recente introduzione dell'endoscopia tridimensionale nella chirurgia endonasale è stata accolta con favore con l'aspettativa di superare la principale limitazione dell'endoscopia, ovvero la mancanza di visione stereoscopica. Questa innovazione

riguarda soprattutto la complessa chirurgia endoscopica della base cranica. Discutiamo quindi la nostra esperienza preliminare come chirurghi ORL con l'approccio endoscopico endonasale esteso con visione 3D per lesioni sopradiaframmatiche in 10 pazienti consecutivi. Questo articolo discute la tecnica chirurgica, le complicanze, i risultati e soprattutto i vantaggi ed i limiti del nuovo strumento. Riteniamo che il sistema 3D mostri i suoi limiti principali quando la chirurgia è condotta in spazi stretti. Comunque, la maggiore consapevolezza dell'anatomia nasale tridimensionale permette al chirurgo ORL di eseguire una demolizione più selettiva delle strutture nasali, anche nella parte anteriore delle cavità nasali. La percezione della profondità che si ottiene con il sistema 3D permette inoltre una migliore comprensione della morfologia del difetto chirurgico, migliorando le capacità di eseguire una plastica efficace. Nella nostra opinione, sia per i chirurghi ORL che per i neurochirurghi, l'approccio endoscopico endonasale esteso è la principale indicazione per questo strumento innovativo, sebbene siano necessari ulteriori studi su popolazioni più numerose per determinarne la stessa affidabilità della tecnologia 2D HD in termini oncologici.

The recent introduction of the 3D endoscope for endonasal surgery has been welcomed because of its promise to overcome the main limitation of endoscopy, namely the lack of stereoscopic vision. This innovation particularly regarded the most complex transnasal surgery of the skull base. We therefore discuss our early experience as ENT surgeons with the use of a purely 3D endoscopic expanded endonasal approach for supradiaphragmatic lesions in 10 consecutive patients. This article will focus on the surgical technique, the complications, the outcome, and more importantly the advantages and limitations of the new device. We believe that the new 3D system shows its main drawback when surgery is conducted in the narrow nasal spaces. Nevertheless, the improved knowledge of the three-dimensional nasal anatomy enabled the ENT surgeon to perform a more selective demolition of the nasal structures even in the anterior part of the nose. The depth perception obtained with the 3D system also permitted a better understanding of the plasticity of the surgical defects, increasing the confidence to perform successful skull base plasties. We believe that, for both the ENT surgeon and the neurosurgeon, the expanded endonasal approach is the main indication for this exciting tool, although larger prospective studies are needed to determine the equality to the 2D HD endoscope in oncological terms.

Acta Otorhinolaryngol Ital. 2013 Apr;33(2):102-6

3. Chapter 1: Sinonasal anatomy and function.

Dalgorf DM, Harvey RJ.
Applied Medical Research Centre, St Vincent's Hospital, University of New South Wales, and Macquarie University, Darlinghurst, Sydney, Australia.

Abstract

An understanding of paranasal sinus anatomy based on important fixed landmarks rather than variable anatomy is critical to ensure safe and complete surgery. The concept of the paranasal surgical box defines the anatomic limits of dissection. The boundaries of the surgical box include the middle turbinate medially, orbital wall laterally, and skull base superiorly. The "vertical component" of the surgical box defines the boundaries of the frontal recess and includes the middle turbinate and intersinus septum medially, medial orbital wall and orbital roof laterally, nasofrontal beak anteriorly, and skull base and posterior table of frontal sinus posteriorly. The paranasal sinuses are divided into anterior, posterior, and sphenoidal functional cavities based on their distinct drainage pathways into the nose. The ultimate goal of surgery is to create a functional sinus cavity. Application of the paranasal surgical box and its vertical component enables the surgeon to view the limits of dissection with a single position of the endoscope. This will ensure complete dissection of the functional sinonasal compartments and effectively avoid leaving behind disconnected cells from the surgical cavity, mucocele formation, mucous Am J Rhinol Allergy. 2013 Jul;27(4):299-303obstructive phenomenon and enable maximal delivery of topical therapy in the post-operative setting. This article reviews the structure and function of the nasal cartilages and turbinates. It also describes the concept of the paranasal surgical box, key anatomical landmarks and limits of dissection. Normal anatomy and common variants of normal anatomy are discussed.

Am J Rhinol Allergy. 2013 May-Jun;27 Suppl 1:S3-6.

4. Randomized double-blind placebo-controlled crossover study of efficacy of pollen blocker cream for perennial allergic rhinitis.

Li Y, Wang D, Liu Q, Liu J.
Department of Otolaryngology, Eye, Ear, Nose, and Throat Hospital, Fudan University, Shanghai, China.

Abstract

BACKGROUND:

This study evaluates the efficacy and safety of a pollen blocker cream in treatment of perennial allergic rhinitis (PAR) in a Chinese population.

METHODS:

A randomized double-blind placebo-controlled, crossover trial was conducted in the Outpatient Department of the Eye, Ear, Nose, and Throat Hospital, Fudan University, Shanghai, China. Patients diagnosed with PAR were randomly assigned to receive pollen blocker cream or placebo, which was applied and evenly distributed to the lower internal nose region three times daily for a total of 30 days. The primary outcome measures for efficacy were nasal symptom scores (NSSs) and quality of life scores (QoLSs). Medication scores and adverse events were also monitored.

RESULTS:

After application of pollen blocker, the mean NSS fell from 23.1 to 12.4 points, and the QoLSs fell from 83.9 to 53.2 points ($p < 0.001$). The decrease in NSSs of pollen blocker (10.7) was highly significant compared with the placebo (3.6; $p < 0.001$). The decrease in QoLSs of pollen blocker was 30.7 compared with 7.1 in the placebo group, and the difference was also significant ($p < 0.05$). Interestingly, the mean NSS of the placebo group also decreased from 23.7 to 20.1 ($p < 0.05$). Additionally, the efficacy of pollen blocker was superior to the placebo both in adults and in children. However, there was no significant difference for individual symptoms of rhinorrhea, nasal itching, sneezing, and nasal congestion between the pollen blocker group and placebo group ($p > 0.05$). Only one mild epistaxis was reported.

CONCLUSION:

The pollen blocker was significantly more effective than the placebo in relieving allergy symptoms and improving life quality of PAR in 30 Chinese people.

Am J Rhinol Allergy. 2013 Jul;27(4):299-303

5. Chapter 3: Epistaxis.

Sacks R, Chandra R.
Australian School of Advanced Medicine at Macquarie University, Sydney Medical School at University of Sydney, Sydney, Australia. rsacks@optusnet.com.au

Abstract

Epistaxis is a common problem that may range in severity from a minor nuisance to hemodynamically significant bleeding. Vascular anatomy allows for predictable identification of suspicious bleeding sites. Historically, packing was the workhorse of management, but, currently, more directed interventions have become available. These modalities may result in improvements in both cost-effectiveness and patient comfort.

Am J Rhinol Allergy. 2013 May-Jun;27 Suppl 1:S9-10

6. Use of coblation in resection of juvenile Nasopharyngeal angiofibroma.

Cannon DE, Poetker DM, Loehrl TA, Chun RH.
Department of Otolaryngology and Communication Sciences, Medical College of Wisconsin and Children's Hospital of Wisconsin, Milwaukee, Wisconsin, USA

Abstract

We present a series of 4 patients with juvenile nasopharyngeal angiofibroma (JNA) who underwent Coblation-assisted endoscopic resection after preoperative embolization, and discuss the use and advantages of endoscopic Coblation-assisted resection of JNA. Our limited case series suggests that Coblation may be used in the resection of JNA after embolization in a relatively safe, efficient, and effective manner. Coblation allows for decreased bleeding, less need for instrumentation, and improved visualization. There are limited published data in the literature to date on the use of Coblation in endoscopic JNA resection. We describe its use in a more extensive tumor than those previously reported. Further studies are needed to fully define the safety and utility of Coblation technology for this application.

Ann Otol Rhinol Laryngol. 2013 Jun;122(6):353-7

7. Schneiderian papillomas: Comparative review of exophytic, oncocytic, and inverted types.

Vorasubin N, Vira D, Suh JD, Bhuta S, Wang MB.
Head and Neck Surgery, University of California, Los Angeles, California, USA

Abstract

BACKGROUND:

Sinonasal papillomas are benign epithelial neoplasms arising from Schneiderian mucosa. The three subtypes, exophytic, oncocytic, and inverted (inverted papilloma [IP]), should be distinguished from one another histopathologically. This study (1) highlights the histopathological and clinical differences between the Schneiderian papilloma subtypes and (2) identifies clinical features that potentially predict papilloma subtypes.

METHODS:

A retrospective review was performed of patients with Schneiderian papillomas over an 11-year period.

RESULTS:

Seventy patients with sinonasal papillomas who underwent sinus surgery were identified. There were 50 (71%) male and 20 (29%) female subjects diagnosed at an average age of 53 years (range, 13-80 years). Exophytic (n = 25), oncocytic (n = 9), and IP (n = 37) were identified. IP was associated with transformation into squamous cell carcinoma in three (8%) cases and dysplasia in three (8%) cases. Neither oncocytic nor exophytic subtypes were associated with dysplasia or malignancy. On multivariate analysis of potential predictors of papilloma subtype, history of chronic rhinosinusitis (CRS) and location of papilloma were significantly associated with papilloma subtype. Using classification and regression tree model, papilloma subtypes can be predicted based on presence or absence of CRS and papilloma location with nominal 82.4% accuracy.

CONCLUSION:

The inverted and exophytic type are the most common sinonasal papillomas, with the inverted type having an 8% rate of malignant transformation in this study. In contrast, the oncocytic type was not associated with dysplasia or malignancy in our series despite reports in the literature indicating malignant potential. History of CRS and papilloma location can provide clues to the histological subtype, which is important for surgical planning and patient counseling.

Am J Rhinol Allergy. 2013 Jul;27(4):287-92

8. Occupational risk factors for sinonasal inverted papilloma: a case-control study.

d'Errico A, Zajacova J, Cacciatore A, Baratti A, Zanelli R, Alfonzo S, Beatrice F.
Epidemiology Department, Local Health Unit, ASL TO3, , Grugliasco, Italy

Abstract

OBJECTIVES:

Sinonasal inverted papilloma (IP) is an uncommon benign tumour characterised by frequent recurrence and, in approximately 10% of cases, by neoplastic transformation. IP aetiology is unknown but human papillomavirus is detectable in about one quarter of tumours. As some occupational hazards have been reported to be possible risk factors for IP, the aim of this study was to assess risk for sinonasal IP associated with prior exposure to suspected occupational risk factors for sinonasal malignancies.

METHODS:

Between 1996 and 2007, data on incident cases were collected from hospitals throughout the Piedmont region of Italy by the regional sinonasal cancer registry. A questionnaire on occupational history, completed by 127 cases and 337 hospital controls, was used to assign previous exposure to a list of 17 occupational hazards. The relationship between IP and cumulative exposure to these hazards was explored using unconditional logistic regression to statistically adjust for age, sex, area of residence, smoking and co-exposures.

RESULTS:

The risk of IP was significantly increased for ever exposure to welding fumes (OR 2.14) and organic solvents (OR 2.11) after controlling for potential confounders. For organic solvents only, a significant association with continuous cumulative exposure and a significant trend in risk across ordered cumulative exposure categories was found.

CONCLUSIONS:

The present study revealed a significant association and a significant dose-response relationship between occupational exposure to organic solvents and IP. The lack of a dose-response relationship for welding fumes suggests that the observed association with ever Int Forum Allergy Rhinol. 2013 Jun 17.with caution.

Occup Environ Med. 2013 Jun 5

9. Budesonide nasal irrigations in the postoperative management of chronic rhinosinusitis.

Jang DW, Lachanas VA, Segel J, Kountakis SE.
Department of Otolaryngology-Head and Neck Surgery, Medical College of Georgia, Georgia Regents University, Augusta, GA.

Abstract

BACKGROUND:

Nasal steroids play an important role in the postoperative management of patients with chronic rhinosinusitis (CRS). However, commercially available nasal steroid sprays may not deliver adequate amounts of medication to the entire postoperative sinus cavity. The off-label use of budesonide nasal irrigation (BNI) theoretically solves this problem by delivering concentrated steroid solution through a high-pressure, high-volume system. Several studies have attested to the safety of BNI, but there are very few reports of its efficacy.

METHODS:

This is a retrospective review of prospectively-collected data. We identified 60 patients who were prescribed BNI postoperatively, but had a lapse in therapy for 1 month or longer. The 20-item Sinonasal Outcomes Test (SNOT-20) and Lund-Kennedy endoscopy scores while the patients were using BNI were compared with scores from the same patients while they were not using BNI. Student paired t test was used for statistical analysis.

RESULTS:

Thirty patients had eosinophilic chronic rhinosinusitis (eCRS) with polyps (eCRSwNP), 13 had allergic fungal sinusitis (AFS), 13 had Samter's triad (ST), and 4 had eosinophilic chronic rhinosinusitis without polyps (eCRSsNP). Mean follow-up time was 25 months (range, 2-89 months). Overall, SNOT-20 scores were significantly lower with BNI ($p < 0.05$). On subgroup analysis, SNOT-20 scores were significantly improved with BNI for patients with eCRS and Samter's triad ($p = 0.04, 0.03$). Endoscopy scores were significantly improved only in the eCRS group ($p = 0.02$).

CONCLUSION:

The addition of BNI is beneficial in the postoperative management of patients with CRS.

Int Forum Allergy Rhinol. 2013 Jun 17.

10. Objective olfactory outcomes after revision endoscopic sinus surgery.

Hsu CY, Wang YP, Shen PH, Weitzel EK, Lai JT, Wormald PJ.
Department of Otolaryngology, Kuang-Tien General Hospital, Taichung, Taiwan

Abstract

BACKGROUND:

Patients who suffer from hyposmia and anosmia report a negative effect on their overall quality of life. Smell disturbance of patients with chronic rhinosinusitis (CRS) can improve after endoscopic sinus surgery (ESS). Although several studies have shown that 50-83% of patients may notice an improvement in olfactory function after ESS, the olfactory improvement after revision ESS (RESS), especially by objective measurements, is still lacking.

METHODS:

Olfactory function was assessed by the traditional Chinese version of the University of Pennsylvania Smell Identification Test (UPSIT-TC) preoperatively and postoperatively, recorded as smell identification test (SIT) score. Olfactory outcomes from anosmia to hyposmia/normosmia, or from hyposmia to normosmia, were considered as "improvement." Postoperative assessments were divided into two periods: period 1 (P1) is defined as >6 but <12 months postoperatively; period 2 (P2) is defined as >12 but <24 months postoperatively.

RESULTS:

Thirty-two patients with smell disturbance preoperatively (period 0 [P0]) and confirmed by UPSIT-TC were enrolled into this study. Mean SIT score at P0 was 13.3; mean SIT score at P1 was 18.6; mean SIT score at P2 was 20.4. The presence of nasal polyps blocking the olfactory cleft were associated with better olfaction improvements ($p < 0.05$) as was the degree of mucosal swelling. The overall improvement rates were 44.8 and 47.8% at P1 and P2, respectively.

CONCLUSION: RESS resulted in objective evidence of olfactory improvement in approximately one-half of our cohort over 16 months of follow-up and offers a treatment option for an otherwise poor prognosis condition.*Am J Rhinol Allergy. 2013 Jul;27(4):96-100.*