



Reader Digest

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Introduction

This newsletter is intended to provide information that is useful to the student and specialist in the field of rhinology and allergic disorders.

The selected recent material represents important fundamental knowledge, current trends or recent developments in this field.

We hope that this newsletter will help the reader have a greater understanding of rhinology and allergic disorders

1. International Pediatric Otolaryngology Group (IPOG) consensus recommendations: Diagnosis, pre-operative, operative and post-operative pediatric choanal atresia care.

[Moreddu E1, Rizzi M2, Adil E3, Balakrishnan K4, Chan K5, Cheng A6, Daniel SJ7, de Alarcon A8, Hart C8, Hartnick C9, Inglis A10, Leboulanger N11, Pransky S12, Rahbar R3, Russell J13, Rutter M8, Sidell D14, Smith RJH15, Soma M16, Spratley J17, Thompson D18, Trozzi M19, Ward R20, Wyatt M21, Yeung J7, Zalzal G22, Zur K2, Nicollas R23.](#)

Abstract

OBJECTIVE:

To provide recommendations to otolaryngologists and allied physicians for the comprehensive management of young infants who present with signs or symptoms of choanal atresia.

METHODS:

A two-iterative delphi method questionnaire was used to establish expert recommendations by the members of the International Otolaryngology Group (IPOG), on the diagnostic, intra-operative, post-operative and revision surgery considerations.

RESULTS:

Twenty-eight members completed the survey, in 22 tertiary-care center departments representing 8 countries. The main consensual recommendations were: nasal endoscopy or fiberscopy and CT imaging are recommended for diagnosis; unilateral choanal atresia repair



should be delayed after at least age 6 months whenever possible; transnasal endoscopic repair is the preferred technique; long term follow-up is recommended (minimum one year) using nasal nasofiberscopy or rigid endoscopy, without systematic imaging.

CONCLUSION:

Choanal atresia care consensus recommendations are aimed at improving patient-centered care in neonates, infants and children with choanal atresia.

Int J Pediatr Otorhinolaryngol. 2019 Aug;123:151-155.

2. Closed and Open Reduction of Nasal Fractures.

[James JG1, Izam AS1, Nabil S2, Rahman NA3, Ramli R2.](#)

Abstract

AIM:

The objective of this review was to determine the different types of surgical intervention in the management of nasal bone fractures, the outcomes, and complications associated with each intervention.

METHODS:

A search was conducted using the PubMed and Cochrane Database of Systematic Review databases from January 1, 1997 until September 9, 2017. The search strategy was constructed using the Population Intervention Comparison Outcome framework with keywords related to nasal fracture and its treatment. Two sets of independent researchers performed the analysis. Qualitative analysis was performed using the Methodological Index for Non-Randomized Studies and National Institute for Clinical Excellence methodology for randomized controlled trial checklists.

RESULTS:

The 4276 titles were obtained from PubMed database alone. Exclusion was made based on the title, abstract and full-text analysis. Finally, 23 papers were included and analyzed. Of the 23 papers, 13 (56.5%) were retrospective record review, 2 (8.7%) were randomized clinical trial or a randomized study and 8 case series (34.8%). 16 (69.6%) studies addressed closed reduction, 3 studies (13%) on open reduction and 4 studies (17.4%) addressed both open and closed reduction. The main focus in the outcome in all studies was accuracy of the anatomical reduction of the nasal bones. Three studies (13.0%) reported restoration of function such as breathing comfort or release in respiratory obstruction and another 3 (13.0%) addressed both cosmetic and breathing outcomes. Residual deformity was the most described complications in the studies



(30.4%). In general, most of the studies were not of high quality as they lacked in some key elements in the Methodological Index for Non-Randomized Studies checklist.

CONCLUSION:

Both closed and open reduction provided good outcomes in cosmetic and breathing. Septoplasty is recommended to be performed simultaneously with fracture reduction.

J Craniofac Surg. 2019 Aug 21.

3. Evaluating nasal cautery techniques in epistaxis.

[Bastianpillai J1, Saxby C1, Coyle P2, Armstrong A3, Mohamid W4, Mochloulis G5.](#)

Abstract

BACKGROUND:

Silver nitrate cautery and bipolar electrocautery are commonly used in the treatment of epistaxis. Currently, there are no recommendations on optimum contact times or power for nasal cautery. ENT consultant practice in the UK has not previously been evaluated.

METHODS:

This study examined the burn depth associated with silver nitrate (75 per cent concentration) cautery and bipolar electrocautery on porcine septum samples, using varying contact times and power. ENT consultants completed a survey evaluating their practice.

RESULTS AND CONCLUSION:

ENT consultant practice of nasal cautery was shown to vary widely. Silver nitrate cautery with a contact time of less than 30 seconds does not cause a full thickness burn. The findings lend some support to bilateral cauterisation with silver nitrate. Bipolar electrocautery should be set at lower than 10 W and with a contact time of less than 4 seconds to reduce the risk of complications associated with a full thickness burn

J Laryngol Otol. 2019 Oct 7:1-5.

4. Imaging of adult nasal obstruction.

[Whyte A1, Boeddinghaus R2.](#)

Abstract

The commonest causes of nasal obstruction are rhinitis and chronic rhinosinusitis, which affect up to 30% and 14% of the adult population, respectively. The global financial burden is huge, estimated at \$5 billion for rhinitis and \$8.6 billion for chronic rhinosinusitis per annum in



the USA. On referral for imaging, computed tomography (CT) is indicated initially when there is a suboptimal response to medical treatment of these mucosal diseases or there are "red flags," such as persistent unilateral obstruction, epistaxis, pain, and orbital or neurological symptoms. A mass visible at rhinoscopy or endoscopy in the nose or nasopharynx and lymphadenopathy are further indications. The anterior (cartilaginous) nose plays a key role in the aetiology of nasal obstruction as it accounts for 50-75% of the total resistance to airflow in the upper airway. It has been ignored in the imaging literature, but extensively evaluated by clinicians using a range of methods, including CT. Oblique reconstructions perpendicular to the parabolic curve of lamellar airflow provide accurate assessment of the anterior nose. A thorough and systematic approach to assessing the nose addresses the discrepancy between imaging and clinical evaluation of structural causes of nasal obstruction, especially septal deviation, reported in the surgical literature. Nasal tumours are a very uncommon cause of nasal obstruction; magnetic resonance imaging is commonly performed to assess their full extent and improve the specificity of diagnosis

Clin Radiol. 2019 Sep 9.

5. Prevalence of allergic rhinitis in children with otitis media with effusion.

[Saifudina N1, Husaina S2, Goha BS3.](#)

Abstract

Introduction. The prevalence of allergic rhinitis in children with persistent otitis media with effusion in different countries varies between 82% to 93%. Many risk factors of otitis media with effusion has been studied and proven. However, its association with allergic rhinitis remains controversial. **Objective.** The main objective of this study is to determine the prevalence of allergic rhinitis in children with persistent otitis media with effusion. This study is also aimed to identify the risk factors of otitis media with effusion, common allergens associated with allergic rhinitis and determine the hearing threshold of children with otitis media with effusion. **Methods.** A hundred and thirty children were recruited. History taking, physical examination and hearing assessment were done in the first visit. Those with allergic rhinitis underwent skinprick test and treated with intranasal corticosteroid and antihistamine. A second examination and hearing assessment were then repeated after 3 months. **Results.** The prevalence of allergic rhinitis in children with persistent otitis media with effusion in this study was noted to be 80.3%. Among these children, dust mites appeared to be the most common allergen (87.7%). Another risk factor appeared to be families with more than 4 members per-household (96%). It is noted that that otitis media with effusion caused a hearing loss up to 33 dB. However, there was a statistically significant improvement of the hearing threshold during second visit after commencement of allergy treatment. It was also noted that the hearing threshold in allergic rhinitis group was significantly impaired compared to the non-allergic rhinitis group.



Conclusion. Allergic rhinitis and larger family household appeared to be common risk factors in children with persistent otitis media with effusion. There is significant hearing loss noted in children suffering from otitis media with effusion and allergic rhinitis. The hearing threshold improved remarkably with medical therapy. This study hence clarifies the controversy on the association between allergic rhinitis and otitis media with effusion .

Eur Ann Allergy Clin Immunol. 2019 Oct 31.

6. Invasive and Non-Invasive Fungal Rhinosinusitis-A Review and Update of the Evidence.

[Deutsch PG1, Whittaker J2, Prasad S3.](#)

Abstract

Fungal infections are a subset of infectious processes that an otolaryngologist is required to be familiar with. They can be encountered in otology, rhinology and head and neck surgery. The presence of fungal rhinosinusitis is well recognised by otolaryngologists, but the classifications and appropriate management are not so well understood. The prevalence of fungal sinus disease is thought to be have been increasing in recent decades There is speculation that this may be due to increased awareness, antibiotic overuse and increased use of immunosuppressant medications. Added to this, there has been a large amount published on the role of fungi as a causative organism in chronic rhinosinusitis. Given the importance of fungal rhinosinusitis in clinical practice, we aim to review the classification and current management strategies based on up-to-date literature

Medicina (Kaunas). 2019 Jun 28;55(7).

7. Nasopharyngeal Angiofibroma.

[Tork CA1, Simpson DL2.](#)

Excerpt

The earliest known documentation of nasopharyngeal angiofibroma (NA) dates to Hippocrates in the fifth century B.C.[1] Commonly referred to as juvenile nasopharyngeal angiofibroma (JNA), it is also known as juvenile angiofibroma (JAF), or fibromatous or angiofibromatous hamartoma of the nasal cavity.[2] Nasopharyngeal may not be entirely accurate, as some sources state that it arises from the sphenopalatine foramen and the posterior nasal cavity,[1][3] while others proffer that it has more of a choanal and nasopharyngeal origin.[4] What research does agree upon is that JNA is a benign, highly vascular lesion that comprises approximately 0.05 to 0.5% of all head and neck masses.[5][6][7] Though histologically benign, it often demonstrates aggressive features with local invasion into the nasal turbinates, nasal septum, and medial pterygoid lamina. It commonly extends into the nasal



cavity, nasopharynx, and pterygopalatine fossa, with larger lesions extending into the sphenoid, maxillary, and ethmoid sinuses. They can also demonstrate extension through the inferior orbital fissure, and into the masticator space through the infratemporal fossa. Severe disease is likened to have orbital and intracranial involvement, seen in approximately 10 to 37% of cases.[8] As previously mentioned, JNA is a highly vascular lesion, with one or more arterial vascular pedicles. The most common primary arterial supply is the internal maxillary artery, a branch of the external carotid artery.[9] Larger lesions may invoke multiple feeding arteries, with even bilateral involvement. The ascending pharyngeal artery is the second most common sizeable supplying branch of the external carotid artery, with additional accessory arteries including the middle meningeal, accessory meningeal, and facial artery branches. Research has also described the recruitment of internal carotid artery branches, most commonly the vidian artery, and to a slightly lesser extent the ophthalmic artery.[10]

StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2019-. 2019 Aug 18.

8. Endoscopic Resection of Pediatric Skull Base Tumors: An Evidence-Based Review.

[Shenouda K1, Yuhan BT1,2, Mir A1, Gonik N1,3, Eloy JA4,5,6,7, Liu JK4,6,7, Folbe AJ2,8, Svider PF4.](#)

Abstract

Objectives To perform a systematic review examining experiences with endoscopic resection of skull base lesions in the pediatric population, with a focus on outcomes, recurrence, and surgical morbidities. **Methods** PubMed/MEDLINE, Cochrane Library, Embase, and Web of Science databases were evaluated. Studies were assessed for level of evidence. Bias risk was evaluated using the Cochrane Bias tool, Grades of Recommendation, Assessment, Development and Evaluation (GRADE), and Methodological Index for Non-Randomized Studies (MINORS) criteria. Patient characteristics, pathology, site of primary disease, presenting symptoms, stage, procedure specific details, and complications were evaluated. Results were reported using the Preferred Reporting Systems for Systematic Reviews and Meta-Analysis guidelines. **Results** Ninety-three studies met criteria for inclusion, encompassing 574 patients with skull base tumors. The GRADE and MINORS criteria determined the overall evidence to be moderate quality. The most common benign and malignant pathologies included juvenile nasopharyngeal angiofibromas (n = 239) and chondrosarcomas (n = 11) at 41.6 and 1.9%, respectively. Of all juvenile nasopharyngeal angiofibroma tumors, most presented at stage IIIa and IIIb (25.8 and 27.3%, respectively). Nasal obstruction (16.5%) and headache (16.0%) were common symptoms at initial presentation. Surgical approaches included endoscopic endonasal (n = 193, 41.2%) and endoscopic extended transsphenoidal (n = 155, 33.1%). Early (< 6 weeks) and late (>6 weeks) complications included cerebrospinal fluid leak (n = 36, 17.3%) and endocrinopathy (n = 43, 20.7%). Mean follow-up time was 37 months (0.5-180 months), with 86.5% showing no



evidence of disease and 2.1% having died from disease at last follow-up. **Conclusion** Endoscopic skull base surgery has been shown to be a safe and effective method of treating a variety of pediatric skull base tumors. If appropriately employed, the minimally invasive approach can provide optimal results in the pediatric population

J Neurol Surg B Skull Base. 2019 Oct;80(5):527-539.

9. Clinical Implications of Carcinoma In Situ in Sinonasal Inverted Papilloma.

Maina IW1, Tong CCL1, Baranov E2, Patel NN1, Triantafillou V1, Kuan EC1,3, Kohanski MA1, Papagiannopoulos P1, Yan CH1, Workman AD1, Lambert JL1, Cohen NA1, Kennedy DW1, Adappa ND1, Feldman MD2, Palmer JN1.

Abstract

OBJECTIVE:

Sinonasal inverted papilloma (IP) is a typically benign sinonasal tumor with a tendency to recur and the potential for malignant transformation. Varying degrees of dysplasia may be present, of which carcinoma in situ (CIS) is most advanced. We hereby describe the biological and clinical behavior of IP with CIS (IPwCIS).

STUDY DESIGN:

Retrospective cohort.

SETTING:

Tertiary academic referral center.

SUBJECTS AND METHODS:

Patients who underwent surgical resection for IP between 2002 and 2017. Pertinent clinical data were obtained, and all IPwCIS cases were histologically confirmed.

RESULTS:

In total, 37 of 215 cases (17.2%) were identified with IPwCIS. Mean age was 57 years and 86.5% of patients were male. Median follow-up was 82 months, and the recurrence rate was 27%. The maxillary sinus was the most common primary site (37.8%) and 14 tumors (37.8%) demonstrated multifocal attachment, which was associated with recurrence (odds ratio [OR], 9.7; 95% confidence interval [CI], 1.4-112.8; $P = .028$). IPwCIS was also associated with multiple recurrences (OR, 2.71; 95% CI, 1.246-5.814; $P = .021$). Most patients were treated with surgery alone (89.1%) and 4 patients received adjuvant radiotherapy (8.1%). Only 1 patient (2.7%) demonstrated malignant transformation after definitive surgery.



CONCLUSIONS:

IPwCIS represents the most severe degree of dysplasia prior to malignant transformation and is associated with higher recurrence rate and multifocal involvement but low rate of conversion to invasive carcinoma. The need for adjuvant therapy remains controversial, and further research into the etiology of the disease is warranted

Otolaryngol Head Neck Surg. 2019 Oct 22:194599819883298.

10. The association between diabetes and olfactory impairment in adults: A systematic review and meta-analysis.

[Kim SJ1](#), [Windon MJ1](#), [Lin SY1](#).

Abstract

Background:

Evidence suggests that olfactory impairment (OI) may be a degenerative neurologic complication of diabetes; however, the association is not yet well established. The objective of this work was to systematically review existing literature on the association between diabetes and OI in adults, with meta-analysis of evaluable studies.

Methods:

A literature search encompassing 358 abstracts from the last 75 years in PubMed, EMBASE, and Cochrane was performed. English-language articles investigating adults with diabetes and OI in comparison to control groups with original data and ≥ 7 subjects were included. The Newcastle-Ottawa scale was applied for quality assessment. Two investigators independently reviewed all articles. For meta-analysis, the odds ratio of OI in diabetes compared with control groups was calculated using the fixed effects model.

Results:

The initial search yielded 358 abstracts, from which 21 articles were reviewed and 11 articles ($n = 6,747$) were included. Studies included were case-control (64%) or cross-sectional (36%) with evidence level 3b. On the Newcastle-Ottawa scale, the mean quality assessment score for case-control and cross-sectional studies was 7.4 (maximum of 9) and 7.0 (maximum of 10), respectively. A statistically significant association between diabetes and olfaction compared with controls was found in 6 (55%) of the 11 articles. Four studies were eligible for meta-analysis, which yielded an overall odds of having OI with diabetes as 1.58 times more likely than in control groups (95% CI [1.16, 2.16]; $I^2 = 10.3\%$).



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Conclusions:

The reviewed studies support a significant association between diabetes and OI. Further studies are warranted to characterize this association

Laryngoscope Investig Otolaryngol. 2019 Aug 7;4(5):465-475.