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

## 1. First olfactory fiber as an anatomical landmark for frontal sinus surgery.

Upadhyay S1, Buohliqah L1, Vieira Junior G2, Otto BA1,2, Prevedello DM1,2, Carrau RL1,2.

**Abstract**

**OBJECTIVES/HYPOTHESIS:**

Access to the frontal sinuses is technically challenging owing to their anterosuperior location, diverse anatomy, close proximity to critical structures and the need to work in a relatively narrow space with angled-lens endoscopes and instruments. This study attempts to study the relationship of the first olfactory fiber with the frontal sinus posterior wall, assessing its fidelity as a surgical landmark during frontal sinus surgery.

**STUDY DESIGN:**

Anatomic study.

**METHODS:**

Fifteen cadaveric specimens were studied. Measurements were obtained bilaterally using the data from individual CT scans. Median A-P was defined as the anteroposterior (A-P) diameter measured just lateral to the intersinus septum, paramedian A-P was measured 5 mm lateral to the septum, and maximum A-P was defined as the maximum anteroposterior diameter on axial images. A surgical navigation device was used to calculate the distance between the first olfactory fiber and the posterior table of the frontal sinus.

**RESULTS:**

The mean distance between the first olfactory fiber and the posterior wall of the frontal sinus was (4.03 ± 2.7) mm on the right side and (4.2 ± 2.9) mm on the left. This distance strongly correlated with the maximum A-P diameter of the sinus.

**CONCLUSIONS:**

In a cadaveric model, the first olfactory fiber was found to be an average of 4.0 mm posterior to the frontal sinus. The significant variability of this distance should be considered when using the first olfactory fiber to establish the posterior boundary of a frontal sinusotomy. Drilling no further posterior than 7 mm rostral to the first olfactory fiber would be safe in 91% of patients.

Laryngoscope. 2015 Oct 22.

## 2. Study of hemostasis procedures for posterior epistaxis.

Iimura J1, Hatano A2, Ando Y3, Arai C3, Arai S3, Shigeta Y3, Kojima H3, Otori N3, Wada K3.

**Abstract**

**OBJECTIVE:**

Hemostasis is difficult in patients with bleeding emanating from the deep regions in the nasal cavity; however, there is no standard treatment method. We studied hemostasis procedures in patients who visited our outpatient department and presented with idiopathic epistaxis extending from the posterior nasal cavity to Kiesselbach's area.

**METHODS:**

The subjects were patients with epistaxis who visited our hospital between June 2008 and May 2010. We asked specific questions at the time of the hospital visit and examined patients using a nasal speculum, a flexible endoscope, and a rigid endoscope (0 or 70 degree) to identify bleeding sites. Hemostasis using electrocoagulation was selected as the first-line therapy for patients in whom a bleeding point had been identified, whereas hemostasis using a gauze tampon was performed in patients in whom the bleeding point was unknown. The subjects were analyzed by multivariate logistic regression analysis.

**RESULTS:**

The bleeding point was unknown in most cases of recurrent posterior epistaxis. Electrocoagulation was the best hemostasis procedure. Identifying the bleeding points as much as possible and performing electrocoagulation at these sites was the preferred procedures.

**CONCLUSION:**

We propose the treatment procedure for refractory epistaxis. When it is difficult to identify a bleeding point in a patient with refractory epistaxis due to a deviated nasal septum, a bleeding point should be identified after septoplasty; for bleeding from the sphenopalatine artery region, electrocoagulation or endoscopic cauterization of the sphenopalatine artery should be performed.

AurisNasus Larynx. 2015 Oct 30

## 3. Concomitant corticosteroid nasal spray plus antihistamine (oral or local spray) for the symptomatic management of allergic rhinitis.

Feng S1, Fan Y2, Liang Z3, Ma R4, Cao W5.

**Abstract**

The purpose of this study was to perform a systematic review and meta-analysis of randomized controlled trials (RCTs) to compare the symptomatic management of corticosteroid nasal spray plus antihistamine (oral or local spray) with that of either therapy given alone, or placebo in patients with allergic rhinitis (AR). The PRISMA guidelines for meta-analysis reporting were followed. Total nasal symptom scores and individual nasal symptom scores were pooled after assessing heterogeneity among studies. The pooled estimates were expressed as weighted mean differences (WMD) between treatments. A total of ten studies fulfilled eligibility. Three trials studied the combination therapy of corticosteroid nasal spray and oral antihistamine. Pooled results of two trials failed to show significant difference on total nasal symptoms between combination therapy and intranasal corticosteroid alone (WMD = -0.20, 95 % CI -0.38 to -0.01, P = 0.04). The qualitative analysis showed that combination therapy has greater efficacy than oral antihistamines alone or placebo in improving symptoms. Seven trials investigated corticosteroid nasal spray plus antihistamine nasal spray. The cumulative meta-analysis of six RCTs revealed that combination therapy was superior to solo intranasal corticosteroid (WMD = -1.16, 95 % CI -1.49 to -0.83, P < 0.00001), solo intranasal antihistamine (WMD = -1.73, 95 % CI -2.08 to -1.38, P < 0.00001), and placebo (WMD = -2.81, 95 % CI -3.16 to -2.47, P < 0.00001) in improving total nasal symptom scores. Intranasal corticosteroid plus oral antihistamine have similar efficacy to intranasal corticosteroid alone, greater efficacy than oral antihistamines alone or placebo in reducing nasal symptoms for AR patients. Intranasal corticosteroid plus intranasal antihistamine are significantly superior to either therapy given alone, or placebo

Eur Arch Otorhinolaryngol. 2015 Nov 6

## 4. Fungal Sinusitis.

Raz E1, Win W1, Hagiwara M1, Lui YW1, Cohen B1, Fatterpekar GM2.

**Abstract**

Fungal sinusitis is characterized into invasive and noninvasive forms. The invasive variety is further classified into acute, chronic and granulomatous forms; and the noninvasive variety into fungus ball and allergic fungal sinusitis. Each of these different forms has a unique radiologic appearance. The clinicopathologic and corresponding radiologic spectrum and differences in treatment strategies of fungal sinusitis make it an important diagnosis for clinicians and radiologists to always consider. This is particularly true of invasive fungal sinusitis, which typically affects immuno compromised patients and is associated with significant morbidity and mortality. Early diagnosis allows initiation of appropriate treatment strategies resulting in favorable outcome.

Neuroimaging Clin N Am. 2015 Nov;25(4):569-76.

## 5. Clinical Consensus Statement: Septoplasty with or without Inferior Turbinate Reduction.

Han JK1, Stringer SP2, Rosenfeld RM3, Archer SM4, Baker DP5, Brown SM6, Edelstein DR7, Gray ST8, Lian TS9, Ross EJ10, Seiden AM11, Setzen M12, Tollefson TT13, Ward PD14, Welch KC15, Wise SK16, Nnacheta LC17.

**Abstract**

**OBJECTIVE:**

To develop a clinical consensus statement on septoplasty with or without inferior turbinate reduction.

**METHODS:**

An expert panel of otolaryngologists with no relevant conflicts of interest was assembled to represent general otolaryngology and relevant subspecialty societies. A working definition of septoplasty with or without inferior turbinate reduction and the scope of pertinent otolaryngologic practice were first established. Patients 18 years and older were defined as the targeted population of interest. A modified Delphi method was then used to distill expert opinion into clinical statements that met a standardized definition of consensus.

**RESULTS:**

The group defined nasal septoplasty as a surgical procedure designed to correct a deviated nasal septum for the purpose of improving nasal function, form, or both. After 2 iterative Delphi method surveys, 20 statements met the standardized definition of consensus, while 13 statements did not. The clinical statements were grouped into 8 categories for presentation and discussion: (1) definition and diagnosis, (2) imaging studies, (3) medical management prior to septoplasty, (4) perioperative management, (5) surgical considerations, (6) adjuvant procedures, (7) postoperative care, and (8) outcomes.

**CONCLUSION:**

This clinical consensus statement was developed by and for otolaryngologists and is intended to promote appropriate and, when possible, evidence-based care for patients undergoing septoplasty with or without inferior turbinate reduction. A complete definition of septoplasty with or without inferior turbinate reduction was first developed, and additional statements were subsequently produced and evaluated addressing diagnosis, medical management prior to septoplasty, and surgical considerations, as well as the appropriate role of perioperative, postoperative, and adjuvant procedures, in addition to outcomes. Additionally, a series of clinical statements were developed, such as "Computed tomography scan may not accurately demonstrate the degree of septal deviation," "Septoplasty can assist delivery of intranasal medications to the nasal cavity," "Endoscopy can be used to improve visualization of posterior-based septal deviation during septoplasty," and "Quilting sutures

can obviate the need for nasal packing after septoplasty." It is anticipated that the application of these principles will result in decreased variations in the care of septoplasty patients and an increase in the quality of care

Otolaryngol Head Neck Surg. 2015 Nov; 153(5):708-20.

## 6. A Comparison of Bipolar Electrocautery and Chemical Cautery for Control of Pediatric Recurrent Anterior Epistaxis.

Johnson N1, Faria J2, Behar P3.

**Abstract**

**OBJECTIVE:**

To compare the outcome of children with anterior epistaxis treated intraoperatively with either bipolar electrocautery or silver nitrate chemical cautery.

**STUDY DESIGN:**

Case series with chart review.

**SETTING:**

Tertiary-care pediatric otolaryngology practice.

**SUBJECTS:**

Children aged 2 to 18 years treated with either intraoperative bipolar electrocautery or silver nitrate chemical cautery of the anterior nasal septum for recurrent anterior epistaxis.

**METHODS:**

Any reported bleeding event after surgery was recorded. The mean time from surgery to recurrent epistaxis was compared between groups.

**RESULTS:**

Fifty patients underwent bipolar electrocautery, while 60 patients underwent silver nitrate chemical cautery. Within 2 years, 1 (2%) patient in the bipolar electrocautery group and 13 (22%) patients in the silver nitrate chemical cautery group had recurrent epistaxis (P = .003). Two years after treatment, there was no difference between treatment groups. Overall, 4 patients (8%) had recurrent epistaxis postoperatively in the bipolar electrocautery group at a mean of 4.34 years after treatment,

while 17 (28.3%) patients recurred after a mean of 1.53 years of treatment in the silver nitrate chemical cautery group (P = .01).

**CONCLUSION:**

Compared to those treated with chemical cautery, those treated with bipolar electrocautery had a longer nosebleed-free period and a lower incidence of recurrent epistaxis within 2 years of treatment. Beyond 2 years, the treatment methods are equivocal. Bipolar electrocautery may be a superior treatment in children who will not tolerate in-office chemical cautery, in those with a risk of severe bleeding, or when it can be combined with other operative procedures

Otolaryngol Head Neck Surg. 2015 Nov; 153(5):851-6.

## 7. Current indications for the osteoplastic flap.

Rivera T1, Rodríguez M2, Pulido N2, García-Alcántara F2, Sanz L[2].

**Abstract**

**INTRODUCTION AND OBJECTIVES:**

Endoscopic sinus surgery is the technique of choice in most of the frontal sinus diseases, both inflammatory and tumour-related. This is why the external approach using osteoplastic flap (OF) would be limited to cases with a difficult endoscopic approach. Our aim was to review the current indications of the osteoplastic flap in the treatment of frontal sinus pathology, through a retrospective study of patients undergoing this technique.

**METHODS:**

We performed a retrospective study of 14 patients who were treated with the osteoplastic flap procedure. All the surgical indication criteria, type of sinus disease, presence or absence of prior endoscopic surgery, surgical findings, complications and recurrence were reviewed.

**RESULTS:**

The pathologies found were 1 osteoma (7.1%), 3 inverted papilloma (21.4%) and 10 mucoceles (71.4%). Nine patients had a prior endoscopic surgery and 10 patients had an orbital dehiscence (9 mucocele, 1 papilloma). Frontal osteoma was Grade IV and the papilloma cases were Krouse Stage III. Surgical revision was required for 21.4%.

**CONCLUSIONS:**

The main indications for an OF in patients with inflammatory disease are lateral extension and frontal recess neo-osteogenesis. In osteoma cases, it depends on the size of the tumour. In inverted

papilloma cases, the indication is multifocal implantation with origin in the anterior and lateral wall. In all cases, performing the osteoplastic flap must be individualised

Acta Otorrinolaringol Esp. 2015 May 26

## 8. Challenges in the Management of Inverted Papilloma: A Review of 72 Revision Cases.

Adriaensen GF1, Lim KH2, Georgalas C1, Reinartz SM1, Fokkens WJ1.

**Abstract**

**OBJECTIVES/HYPOTHESIS:**

We report on the treatment outcome of endoscopically managed sinonasal inverted papilloma, focusing on revision cases. Our aim was to identify the properties of revision cases that affect treatment outcome by comparing them to primary cases in a single center. We propose using 5-fluorouracil (5-FU) in the postoperative management of inverted papilloma.

**STUDY DESIGN:**

A retrospective single-center case series. This study met the criteria for approval by the local medical ethics committee.

**METHODS:**

We performed a retrospective chart review identifying patients operated on between January 2003 and September 2013. Data were collected about patient demographics, symptoms, tumor attachment site, imaging, intraoperative and pathological findings, surgical approaches, postoperative treatment, follow-up, and recurrence.

**RESULTS:**

One hundred and twenty-one (72 revision and 49 primary) cases were retrieved with a minimum follow-up of 1 year. Revision cases have significantly higher Krouse staging (P = 0.003), different distribution of tumor attachment sites, and higher recurrence rates. The recurrence rate was 4.1% for primary cases (mean follow-up 35.5 months) and 18.1% for revision cases (mean follow-up 45 months). Eight of the recurrent cases recurred within the first year. 5-fluorouracil was applied postoperatively in 18 (5 primary and 13 revision) cases, which included one (5.6%) recurrence and one minor complication (transient periorbital swelling).

**CONCLUSION:**

The most important factors in preventing the recurrence of inverted papilloma are the determination of the location of the attachment and the completeness of resection in the primary endoscopic surgery. Revision cases have a higher recurrence rate, and the attachment sites are surgically more challenging. The use of 5-FU might have a place in the postoperative treatment of surgically challenging inverted papilloma.

Laryngoscope. 2015 Sep 7.

## 9. Magnetic Resonance Imaging Features of Schwannoma of the Sinonasal Tract.

Yang B1, Wang Y, Wang S, Dong J.

**Abstract**

**PURPOSE:**

The purpose of the study was to explore the characteristic magnetic resonance imaging (MRI) findings of schwannoma of the sinonasal tract.

**METHODS:**

Eighteen patients with histopathologically confirmed sinonasal schwannoma underwent conventional MRI, and 12 had dynamic contrast-enhanced MRI studies synchronously. The morphology feature, signal intensity, enhancement degree, and time intensity curve (TIC) pattern of schwannomas were retrospectively analyzed.

**RESULTS:**

This entity appeared as a well-circumscribed, oval or fusiform soft tissue mass with a mean greatest diameter of 38 mm. Schwannomas exhibited isointense on T1-weighted image in 12 patients and hypointense in 6. On T2-weighted image, the lesions were heterogeneously isointense in 14 patients and hyperintense in 4. The lesions had heterogeneously moderate and marked contrast enhancement in 2 and 16, respectively. The mottled-, island-, and multicyst-like appearance were identified in 3, 4, and 11, respectively. Compared with inverted papilloma and lobular capillary hemangioma, the type I TIC is characteristic of schwannoma.

**CONCLUSIONS:**

A well-circumscribed mass displaying T2 intermediate signal intensity, marked enhancement, and type I TIC, with cystic changes, strongly suggests the diagnosis of sinonasal schwannoma.

J Comput Assist Tomogr. 2015 Sep 10

## 10. [MRI evaluation of the olfactory pathway].

Miao X, Liu J, Wei Y.

**Abstract**

MRI scanning is an important technique to evaluate the olfactory system, special scanning parameters could reveal the fine structures of the olfactory pathway. Olfactory cleft, olfactory bulb/tract, olfactory sulcus and olfactory center are the main targets of the scanning. Chronic rhino-sinusitis, head trauma, congenital dysplasia and neural degenerative diseases are the primary causes of the olfactory dysfunction and have particular imaging presentations respectively. Besides indicating the olfactory pathway lesions, MRI could also present the etiology and the prognosis of the olfactory disorder

Lin Chung Er Bi Yan HouTou Jing WaiKeZaZhi. 2014 Jul; 28(14):1093-6.