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Piezo Assisted Turbinoplasty: A Nopel Rapid and Safe Technique
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ABSTRACT
Consensus is still lacking on the ideal treatment of turbinate hypertrophy concurrent with rhinoseptoplasty. A novel technique of turbino-plasty consisting of incision-bone fracturing by the use of piezoelectric technique—intramucosal microcauterization—lateralization is described in detail. A series of 157 consecutive patients is reviewed with a maximum follow-up of one year. The technique is fast and easy and allows predictability in avoiding postoperative bleeding and preventing remedialization of the lateralized turbinates. Due to the technology required, its use is suggested especially when piezo is employed during other steps of rhinoseptoplasty.

New Pharyngeal Flaps for Velopharyngeal Insufficiency
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Abstract
Objective: To present the techniques of our new L flaps for treatment of velopharyngeal insufficiency (VPI).

Methods: for persistent VPI (1 year without response to speech therapy). New L pharyngeal flaps was tailored from oropharynx and cross the nasoparynx to be inserted and add 1 cm of the flap into the central part of soft palate. Patients were assessed by examination, nasoendoscopy, and speech evaluation.

Results: Postoperative speech assessment showed significant improvement in nasoendoscopic closure, speech assessment, and nasometric assessments. Grade 4 velopharyngeal closure (complete closure) could mostly be achieved postoperatively. No dehiscence of the flap and no obstructive sleep apnea was reported.

Conclusion: The newly designed pharyngeal flaps are highly effective, reliable, and safe in treating persistent VPI with easy applicability without significant complication.

Endoscopic Decompression of the Inferior Alveolar Nerve in Ameloblastoma associated Dentigerous Cyst.
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SUMMARY
Abstract: Paresthesia of the lower lip in a patient complaining of cystic mandibular swelling is uncommon unless there is inflammation in the cyst wall or it can be caused by simple mechanical compression of the neurovascular bundle by the expanded cyst. Dentigerous cyst (DC) arises from the epithelial remnants of the tooth-forming organ within the normal dental follicle that surrounds an un-erupted tooth. Ameloblastic transformation of a DC lining is not uncommon and it should also be a part of the diagnosis as approximately 50% of ameloblastomas arise from the epithelial lining of a DC (Ceylan et al., 2010). The treatment goal of mandibular cyst is eradication, while preserving the integrity of the bone and the function of the Inferior Alveolar Nerve (IAN). However, marsupialization and decompression is an alternative used for very large cysts.

Enucleation of a large cyst in the mandible is an invasive method that might be associated with complications. Marsupialization is a less invasive alternative method but it involves a prolonged and uncomfortable healing period.

The generation of resultant bone defect always has a dilemma of using filler materials or not. Using bone grafts at the same time as surgical enucleation has a high failure rate (Lim et al., 2017). Whichever is the final treatment choice bone defects after enucleation are always generated. After 6 months viable bone stability and restoration can be assumed. This study addresses a less invasive surgical technique for treating large mandibular cysts compressing the inferior alveolar nerve in association of ameloblastoma.

An intra-oral approach A small area of resorbed outer mandibular cortex, Widened by bone nibbling forceps to reach one cm. in diameter. Then a 0° 4.0 mm. telescope is smoothly introduced inside the mandibular cavity without injuring the cyst wall. The cyst wall is then carefully dissected out the bony walls and decompressing the IAN. Enucleation of the cyst wall was completed at the roof, floor and lateral walls by using 30° 4.0 mm.

Conclusion: Endoscopic-assisted enucleation proved to be an effective method of treating a large mandibular cyst, providing total enucleation with preservation of the IAN in a minimally invasive technique.

Open rhinoplasty approach for repair of large anterior septal perforation.
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Septal perforation is a challenge to the surgeon. Large basal septal defects constitute even more challenge, and are repaired through an open rhinoplasty approach.

The surgeon presents some cases of large anterior basal nasal Septal defect and the operative techniques used in its Management
Bolgerization versus Partial Middle Turbinate Resection after Frontal Sinusotomy

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Abstract:
Objectives: This study aimed to compare the effects of middle turbinate resection versus bolgerization on the incidence of middle meatus synechia and their prognostic value on the patency outcomes after frontal sinusotomy.
Design: A randomised controlled study
Setting: Tertiary centre hospital
Main outcome measures: Thirty-eight patients undergoing bilateral frontal sinusotomy for chronic frontal sinusitis were included. Partial middle turbinate resection was alternated with bolgerization in both nasal cavities of every patient. The Lund–Kennedy endoscopic scores (LKESs) for both sides were compared at the first, third, and sixth months postoperatively. Middle meatus synechia was assessed using the visual analogue score (VAS). Sinus patency was assessed at the end of the sixth month using a 70° nasal endoscope.
Results: The sinus patency outcome was significantly higher in the resected group (34/38) than the bolgerized group (26/38), (p = 0.047*). The VAS scores suggested that the middle turbinate bolgerization group showed a significantly higher incidence of middle meatal synechia than the partial middle turbinate resection group (4.47 ± 2.617 vs 3.29 ± 2.301; p = 0.040*).
Conclusion: Middle turbinate resection showed more favourable results than bolgerization concerning the sinus patency outcome after frontal sinusotomy. It also showed a lower incidence of middle meatus synechia postoperatively.
Keywords: Frontal sinusotomy, Outcome, Resection, Bolgerization

Background
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Supraorbital ethmoid cell (SOEC) is one of the most difficult frontoethmoid cells addressed during frontal sinus surgery. It has never been studied in Middle Eastern countries.
The aim of work is to study the incidence of SOEC in Egyptians and its effect on frontal and/or ethmoid sinuses affection.
Patients and methods: Computed tomographic scans of 47 patients of chronic rhinosinusitis were studied for supraorbital pneumatization; presence of the SOEC; its size, side, number, and relation to the anterior ethmoid artery; size of the frontal sinus; and opacity of the frontal and/or ethmoid sinuses.
Results: The SOEC was encountered in 41 sides (43.6). The incidence of SOEC was least in Far Eastern countries (2.6–7.7%), followed by Europe (10.2–22%), and most prevalent in hot climate countries (35–45%).
Conclusion: It seems that the incidence of the SOEC has geographical and racial variations. Moreover, there is no association between the opacity of the SOEC and the incidence of frontal and/or ethmoid sinuses affection in chronic rhinosinusitis.
Keywords: anterior ethmoidal artery, Egyptian, endoscopic sinus surgery, frontoethmoid cells, Middle East, supraorbital ethmoid cell

Covid-19 related acute invasive fungal sinusitis: Clinical features and outcomes

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Banha University

Abstract
Introduction: There is an noticeable increase in incidence acute invasive fungal sinusitis coincides with ongoing coronavirus pandemic. It is a potentially lethal fungal infection with the most common form being the orbito-rhino-cerebral presentation.
Objectives: The aim of this study is to discuss the different epidemiological, risk factors, clinical presentations and outcomes of the noticeable Covid-19 related acute invasive fungal sinusitis.
Patients and methods: This cross-sectional cohort study included twenty-two adult patients presented with Covid-19 related acute invasive fungal sinusitis. The diagnosis of acute invasive fungal sinusitis was confirmed by histopathological biopsy. All data including: demography information, risk factors, clinical findings, different lines of treatment with the outcomes, were recorded and analyzed.
Results: All patients had diabetes mellitus (100%), and 17 patients (77.3%) had been received systemic steroids. All patients (100%) had unilateral sinosal disease. Proptosis was found in 15 patients (68.2%). Ophthalmoplegia was found in 12 patients (54.5%) and intracranial affection occurred in 10 patients (45.5%). Twenty patients (90.9%) received liposomal amphotericin B. Surgical debridement was performed in 18 patients (45.5%). Total improvement was achieved in 10 patients (45.5%), while the mortality rate was (27.3%).
Conclusion: Diabetes mellitus is the most common pre-existing medical condition associated with Covid-19 related acute invasive fungal sinusitis. Systemic corticosteroid therapy is considered as a predisposing factor.
Keywords: Covid-19; Mucormycosis; Sinusitis.

Endoscopic Endonasal Resection Of Infratemporal Giant Cell Tumour BY

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Giant cell tumor of bone (GCTB) or osteoclastoma is a rare, benign, osteolytic neoplasm that most Commonly occurs in early adulthood and often involves the epiphyses of long bones of the body with Peak incidence ages (20–40 years) with Slight female predominance (32%). Approximately 2% of all giant cell tumors occur in the head and the most common sites are: Sphenoid, ethmoid, Petrous & temporal bones. It Originates from neoplastic nonosteogenic stromal cells of the bone marrow. And its Histology is characterized by the presence of multinucleated osteoclastic giant cells diffusely distributed among a background of mononuclear stromal and macrophage lineage cells. It is locally aggressive disease and surgery is the treatment of choice ± radiotherapy.Aim: the aim of this talk is to present a rare case of infratemporal giant cell tumour and its management.
Sinus headache: Rhinogenic headache or migraine?
Osama Galal Abdelnabi, Minia University

Introduction: ‘Sinus headache and/or facial pain’ (SH) is a common complaint encountered by otolaryngologists, neurologists and general practitioners. However, several studies suggested that the majority of those cases may be attributed to primary headaches (i.e., migraine and tension-type headache (TTH)).

The purpose: The purpose of this study is to evaluate the etiology of SH. The study analyzes the prevalence of respective diagnoses in subjects with SH. The majority of publications indicate that migraine and TTH are the most prevalent causes of SH. Also we will review included treatment trials in subjects with SH.

Conclusion: Findings from this study show that SH without rhinosinusitis responds well to pharmacotherapy targeted at primary headaches. Also we will review and included treatment trials in subjects with SH. The majority of publications indicate that migraine and TTH are the most prevalent causes of SH. Also we will review included treatment trials in subjects with SH. This observation further supports a neurologic etiology of the majority of SH cases.

Middle Turbinate appearance in different clinical stages of acute invasive fungal sinusitis
Osama Galal Abdelnabi, Minia University

Aggregation Of Fungal hyphae On Middle turbinate Mucosa As A sign Of Early Diagnosis For Acute Invasive Fungal Sinusitis
Acute invasive fungal rhinosinusitis (AIFRS) is a life-threatening disease, affecting mostly immunocompromised patients. The overall survival rate of AIFRS patients is as low as 50%.

In these patients, saprophytic fungi, particularly Zygomycetes and Aspergillus, can invade the nasal mucosa and blood vessels, leading to rapid dissemination into the orbits, palate and the brain. Symptoms initially are nonspecific and mimic typical cases of chronic rhinosinusitis, including nasal congestion, drainage, and facial pain/presure. An easy-to-use and accurate predictive imaging model is currently lacking.

Early diagnosis and immediate treatment, including antifungal therapy and surgical debridement, are considered vital for better survival rates.

For this reason, astute diagnosis requires a heightened level of suspicion based on known or potential immunosuppression. Endoscopic findings are variable but classically include pale and/or necrotic nasal mucosa. Reports have variably described hypoesthesia and hyperesthesia on nasal examination but these distinctions are relative and rarely helpful. It was reported that the most likely site of disease to be the anterior aspect of the middle turbinate (67%).

Objective: To report some cases of AIFRS showed aggregation of fungal hyphae on the surface of the middle turbinate helped in early diagnosis of this disease.

The importance of this early sign in diagnosis of AIFRS with aggressive medical and surgical treatment and correction of underlying immune status will be discussed.

Endoscopic Transnasal Transsphenoidal Approach to the Pituitary Lesions: Anatomy, Basic Technique and Avoidance of Pitfalls
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This article reviews the published experience of others and introduces the authors’ insights into the development of an endoscopic pituitary program. While initially challenging, this transition to endoscopic trans-sphenoidal pituitary surgery can yield rewards in the form of superior visualization and potentially more complete tumor resections. With increasing cumulative experience with the endoscopic transsphenoidal technique for pituitary surgery, the improved visualization and less steep learning curve will facilitate more widespread acceptance of endoscopic pituitary surgery as a valid alternative to the trans-septal trans-sphenoidal microscopic approach to pituitary tumors. If not a complete alternative, endoscopic-assisted pituitary surgery will also become more widespread, as endoscopy can easily supplement standard microscopic approaches to pituitary tumors. As transnasal endoscopic approaches to the skull base are increasingly refined in technology and skill, additional applications of this technology may permit skull base approaches through the planum sphenoidale and tuberculum sellae for the removal of giant suprasellar macroadenomas that may otherwise require an open craniotomy for surgical management.

The collaboration between otolaryngologists and neurosurgeons is important for further developing successful endoscopic transsphenoidal pituitary surgery and improving care for patients.

Objective evidence is needed to validate whether the improved visualization results in superior patient outcomes and reduced clinical complications, and if this technique can be reasonably taught in a controlled, supervised setting in residency training programs. Additional outcomes data are needed to evaluate long-term outcomes and define the boundaries of endoscopic transsphenoidal pituitary surgery.

Velopharyngeal Insufficiency (VPI) After Uvulopalatopharyngoplasty (UPPP)

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Summary
Introduction: Uvulopalatopharyngoplasty (UPPP) is currently the most common surgery performed for adults with obstructive sleep apnea (OSA). One of the main risks of uvula excision and UPPP surgery is treatment of obstructive sleep apnea is velopharyngeal insufficiency (VPI). VPI is incomplete closure of the velopharyngeal sphincter between the oropharynx and the nasopharynx.

VPI as a short term & long term outcome of UPPP:
- Short term: VPI would almost be an expected result immediately postoperatively because the UPPP procedure essentially disrupts the anatomic structures that facilitate closure of the communication between the oral and nasal cavities.
- Long term: Anezea et al (2011) study on 14 patients: 1-7 years follow up after UPPP, 42.8% of patients had VPI.

Varendh et al (2012) study on 129 patients: 20 years follow up after UPPP, 14% of patients had VPI.

Correction of VPI: Small VPI: Injection of filler agents like fat, collagen, and hydroxyapatite can be performed into the posterior pharyngeal wall bringing it forward towards the soft palate so that the soft palate can now seal up against the pharyngeal wall.

Large VPI: More aggressive surgery is required whether it be a soft palate lengthening procedure or inserting graft material into the posterior pharyngeal wall.

Home Messages: - The long-term effectiveness of UPPP is limited by the number of studies reporting short-term follow-up only. The studies that report long-term data suggest that complication such as VPI is more common than previously reported.
Impacts of sinonasal polyposis on pulmonary function pre and post function endoscopic surgery

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ABSTRACT
Background: the upper and lower airway form one contagious functional unit and exposed to same similar inflammatory stimuli that support hypothesis disease in one part could reflect or manifest on another.
Objective: to assess the effects of sinonasal polyposis on ventilatory function test pre and post functional endoscopic sinus surgery (FESS).
Methodology: This interventional randomized controlled clinical trial was carried out on 30 patients presented with chronic rhinosinusitis with nasal polyposis. All patients were subjected to nasal obstruction scale evaluation (NOSE) assessment, nasal endoscopic examination, Lund MacKay CT score and PFT pre and three months post FESS.
Results: there was a significant decrease of 2 items of NOSE scale (nasal obstruction and trouble sleeping), endoscopic examination score, and Lund MacKay CT score, with significant increase of PFT (FEV1 %, FVC %, FEV1/FVC ratio and FEV25-75%) three months postoperatively compared to preoperative values (p-value < 0.001). In the preoperative period 73.3% had an obstructive pattern in PFT while in the post-operative period only 36.6% had an obstructive pattern in PFT (p = 0.004). By using multivariate logistic regression analysis, the most significant predictive factors of abnormal PFT in patients with sinonasal polyposis were right CT Lund MacKay scale (B = 0.74, p = 0.014), left CT Lund MacKay scale (B = 0.56, p = 0.01), and total Lund MacKay CT score (0.4, p = 0.01).
Conclusions: the sinonasal polyposis have negative effects in PFTs that improved after FESS. The predictive factor for reduced PFTs in patients with sinonasal polyposis is Lund MacKay CT score.

Unbalanced Expression of Soluble Programmed Death-Ligand 1 and Inducible Costimulator-Ligand in Nasal Polyps

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Abstract
Objective: We aimed to measure the levels of sPD-L1 and sICOS-L in nasal polyps and compare their levels between a group with allergic rhinitis (AR) with nasal polyps and another with allergic fungal rhinosinusitis (AFRS). Also, to assess the relationship between their levels and disease severity.
Methods: The study included 35 patients admitted for endoscopic sinus surgery for nasal polyps, divided into 17 with AR and 18 with AFRS and 20 controls. Radiologic CT score of Lund-Mackay was used to assess the severity of chronic rhinosinusitis. Complete blood cell count was done for all patients. Serum PD-L1 and ICOS-L levels were quantified using ELISA.
Results: A significant decrease was observed in sPD-L1 levels in both groups of patients compared with controls. Only patients with AFRS had a significantly lower level of sICOS-L than controls and was lower than in the AR patients. Only patients with AFRS showed positive correlations between sPD-L1 and the total CT score, also between sICOS-L and both total CT score and eosinophil percentage. A positive correlation was detected between ICOS-L and PD-L1 levels.
Conclusions: The present results suggest a potential protective role of sPD-L1 in AR and AFRS, and only of sICOS-L in AFRS. Thus their manipulation represents a promising therapeutic approach to AR and AFRS. They also have the potential for future use as biomarkers for the assessment of AFRS severity. However, further studies are warranted to clarify their complex role in these types of allergies.

Invasive fungal sinusitis: an alarming sign
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The aim is to pay attention to headache complaint in high risk patients, as an early sign for invasive fungal sinusitis.
Headache, not facial pain, is on of the recent complaints encountered in invasive fungal sinusitis patients. We are going to discuss case of invasive fungal sinusitis whose first compliant was headache and how early detection is very important and how to achieve it in future cases. Besides surgical intervention, it is very important to monitor patients all vital function in today’s case scenario. Our case was a 35-y old female with no chronic disease who recovered from covid 19 infection 1.5 months ago and was not on any medication. Her complaint started by headache which responded weakly to pain medications after 3 days she went to ophthalmologist as pain started to focus in her right eye plus edema of eye lid, she was diagnosed as cellulites so, antibiotic and local drops were prescribed with no improvement. 2 days later she developed severe infection and marked diminution of vision so she came to Ent department, ct and lab work was done to discover blood glucose level of 800 and wbcs of 32.000. Immediate surgical intervention included Ent, ophthalmology and maxillofacial was made to debride all affected tissues. During lateral rhinotomy major buccal abscess was drained explaining high leukocytic count. debridement and exenteration were finished leaving raw healthy-looking tissue behind. Patient was admitted to icu to control blood glucose level, wound dressing and irrigation was done twice daily with no sign of tissue discoloration. patient died of dka and renal impairment after 8 days. The conclusion of this case points us toward these points

- Headache must be taken seriously in high risk groups such as active or recovered covid patients and immunocompromised patients
- Surgical intervention is NOT the most important step in treating such cases but medical correction of the messed-up vitals such as elevated liver or kidney functions and specially elevated blood glucose levels
- Counseling with maxillofacial and plastic is essential before surgery to prepare the patient psychologically when total maxillectomy or eye exentration are needed.
Combination Therapy In Mucormycosis
Dr K. Manjunath
INDIA

ABSTRACT:
AIMS: The purpose of this study is to analyse the effects of combination therapy with inj. liposomal Amphotericin B (LAmB) and Tab. Posaconazole in Mucormycosis.
MATERIALS: A total of 40 patients with history of diabetes mellitus, covid positivity, infusion of steroid injections and immune-compromised were admitted and treated in our hospital between May 2021 to July 2021.
RESULTS: LAmB is less nephrotoxic and result in superior eradication of fungus from the CNS. Reasonable dose would be 5 mg/kg per day, with possible escalation to 10 mg/kg/day in patients with CNS infection. Tab. Posaconazole reported 90% minimum inhibitory concentrations with Mucorales range from 1 to >=4 microgram/ml. The modest existing pre-clinical and clinical data do not support the use of combination therapy, where a combination of high dose LAmB and posaconazole might be considered.
DISCUSSION: The most commonly used antifungal treatment as first line of therapy for mucormycosis is injection liposomal Amphotericin B. There were three reasons for introducing posaconazole in a given patient. Firstly, treatment failure demands for a salvage treatment option. Secondly, lipid based amphotericin B may cause toxic side effects, like nephrotoxicity ex: in patients with long-term uncontrolled diabetes. Thirdly, in successfully treated patients posaconazole may be used as a step-down to oral medication.
CONCLUSION: Mucormycosis is a disease of increasing frequency. It continues to have a higher mortality rate than most other infections, frequently affects young patients, resulting in devastating impact on families.
KEYWORDS: Invasive fungal infection, Management.

Positional Awake Upper Airway Endoscopy in OSA: Concept and Applications
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Abstract
Drug-induced sleep endoscopy (DISE) and awake endoscopy with Müller’s maneuver (MM) are widely practiced by sleep surgeons and are considered the most reliable radiation-free tools in the diagnostic protocol of OSA patients. MM is a simple, non-invasive, low-cost, convenient, and informative maneuver. However, MM data are considered inferior to those of DISE. The main differences (as regards the dynamic anatomy of the UA) between sleep and wakefulness are the effects of both gravity and muscle tone. We assume that the available different results between MM and DISE may be due to the following main possibilities: the first one is the different positional effect as MM is usually done in sitting while DISE is done during supine position (nearer to the patient’s sleep position), the second one is due to lower muscle tone during DISE. Thus, we hypothesized that if MM is done in the supine position (MM-P), the gravity factor would be minimized; then the tone of muscles would be the leading parameter to be assessed. So, MM-P could provide surgical data comparable to DISE.
In this study, we examined OSA patients by MM-P, and MM-S (sitting position) and compared data with DISE. The analysis of the pattern of collapse of the study group revealed that the individual pattern did not change (for the same patient at the same level) in the majority of patients whatever the maneuver or the position. The difference between the maneuvers was the grade of collapse (one grade only).

Sub-mucosal Peeling of Tongue Base with Radiofrequency for the Treatment of Obstructive Sleep Apnea
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ABSTRACT
Objective: To assess the efficacy and safety of Sub-mucosal Peeling of Tongue Base with Radiofrequency. Study Design: Prospective clinical study. Setting: Zagazig and Suez canal Universities medical hospitals Patients and methods: Twenty-one patients with the following criteria: both sex, age between 18-60 years old, BMI less than 35kg/m2, patients with moderate to severe OSA (defined as AHI>15) having multilevel obstruction with the main site at the level of retrolingual collapse confirmed by fiberoptic endoscope during muller’s maneuver and DISE. All patients underwent Sub-mucosal Peeling of Tongue Base with Radiofrequency with ALA pharyngoplasty Beside Polysomnography (PSG) and Drug induced sleep endoscopy (DISE), Cephalometry and CT volumetric studies were used in this study. Follow-up visits were scheduled at 1, 3, 4 weeks, 3 months post-operative. Results: This study found an improving in PSG parameters as Preoperative AHI ranged from 22 to 50 with the mean of 33 ± 8.4. While Postoperative AHI ranged from 10 to 30 with the mean of 16 ± 6.3 (p value 0.001). However LOS mean increased from 79.8 ± 5% to 89.4 ± 3.6%(p-value 0.001). Cephalometry analysis showed a significant difference between preoperative and post-operative findings, As the posterior airway space PAS means significantly increased from 9.1± 1.5 mm pre-operative, , to 13.2 ± 1.4 mm post-operative. (p value 0.001, 95% CI ). Furthermore CT showed also significant changes after operation as the Antro-posterior 2 diameters of the retro-lingual space were increased from (9.3 mm) to (15.1 mm) in sagittal views, And from (10.8 mm) to (16.7 mm) in axial view, So there was a highly statistically significant difference between preoperative and postoperative dimensions (p value 0.001). With a success rate defined as AHI <20 and a 50% decrease in AHI of the pre-operative value, the surgical success rate was 81%. Conclusion: Tongue base Peeling with Radiorequency has high success rate comparable to more invasive technique with improvement in all PSG parameters. Also has a significant result in treating patient with moderate to severe OSA. Keywords: Obstructive apnoea; PSG, Cephalometry, CT volumetric, Tongue base Peeling, Radiorequency.

Stabilization of palatopharyngeus muscle to pterygomandibular raphe under vision in treatment of obstructive sleep apnea
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Abstract
Objective. To describe a modification in the method of fixation of the palatopharyngeus muscle to the pterygomandibular raphe (PMR) by performing this fixation under direct vision instead of fixing it in a blind way in order to obtain an effective and sustainable results in patients with obstructive sleep apnea (OSA).
Study Design. Prospective cohort study.
Setting. Department of Otorhinolaryngology Head & Neck Surgery, Zagazig University.

Subjects and Methods. Twenty-eight (28) patients underwent the anterolateral advancement pharyngoplasty or Barbed reposition pharyngoplasty procedure according to the following criteria: Age between 21 and 60 years, Body mass index (BMI)<35Kg/m2, nocturnal polysomnography (PSG) diagnostic of OSA, Failed or inability to tolerate continuous positive airway pressure (CPAP) and Patients with retropalatal and lateral pharyngeal collapse diagnosed with drug induced sleep endoscopy (DISE). Patients with Severe medical illness, Central type apnea , BMI>35Kg/m2, and retroglossus collapse were excluded from the study. The principle of this technique is to stabilize the palatopharyngeous muscle to the PMR under direct vision rather than the palatopharyngeus muscle to the PMR under direct vision instead of fixing it in a blind way through direct surgical intraoperative identification of the PMR.

Results. Pterygomandibular raphe (PMR) was present on both sides in 18 (64.28 %) patients and absent on both sides in 3 (10.72 %) patients with complete continuity of the buccinators and superior pharyngeal constrictor muscle while in 7 (25 %) patients the PMR was present in one side only and absent in the other side. Pre- and postoperative polysomnography (PSG) findings (mean ±SD) showed significant statistical differences: apnea hypopnea index (AHI) decreased from 40.84 ± 26.93 to 14.81 ± 7.43 (P <.001). The mean preoperative Lowest oxygen saturation (LOS) significantly increased from 79.25 ± 14.93 to 89.92 ± 10.7 (P <.001). Epworth sleepiness scale ESS significantly dropped from 13.25 ± 4.65 to 6.1 ± 2.06. (P <.001). There was no postoperative bleeding, velopharyngeal insufficiency, speech alternations, or taste loss. Based on a threshold of a 50% reduction in AHI and AHI <20, surgical success was 86.8%.

Conclusion. In pharyngeal surgical procedures for OSA, the postoperative bleeding, velopharyngeal insufficiency, speech alternations, or taste loss. Based on a threshold of a 50% reduction in AHI and AHI <20, surgical success was 86.8%. Cephalometry analysis showed a significant difference between preoperative and postoperative findings, including a posterior airway space that increased a mean ± SD from 8.1 ± 2.5 to 12.3 ± 3.7 mm (P = .00; 95% CI, −5.89 to −3.0), position of the mandible to the cranial base (SNB degree) that increased from 77.3 ± 2.7 to 78.5 ± 1.3 (P = .005; 95% CI, −2.11 to −0.4), and improved palatal parameters. The mean (SD) average depth of the osteotomy and genioglossus advancement was 11.8 ± 2.6 mm. None of the all patients had mandible fracture, aesthetic changes of the chin, or detachment of the advanced genioglossus muscle.

Keywords: modified genioglossus advancement, obstructive sleep apnea

What should a surgeon know about the endotypes of Chronic rhinosinusitis with nasal polyps?

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Although in the Western world about 80% of nasal polyps carry a type 2 signature, this might be between 20% and 60% in Asian countries. A huge challenge has already appeared due to the eosinophilic CRSwNP was extremely easy to relapse. In the recent years, the prognosis studies about CRSwNP are rising rapidly with the development of endoscopic sinus surgery. Ongoing research is focused on improving biomarkers for diagnosis, prognosis, and personalized optimal therapy. CRSwNP patients may be classified into five phenotypes with different polyp recurrence rates, based on the presence of predominantly plasma cells, lymphocytes, neutrophils, eosinophils or mixed inflammatory cells in polyps. Tissue eosinophils are characteristic of inflammation in most but not all patients with CRSwNP and may be useful for defining subgroups and making treatment choices. It will be important to identify validated eosinophil-related biomarkers in different continents/countries for future research and for the introduction of precision medicine.

Update on Inspire upper airway stimulation therapy for obstructive sleep apnea

Nico De Vries
Netherlands

For patients with moderate to severe sleep apnea who are intolerant for CPAP therapy, who fulfill certain strict criteria, N. hypoglossus nerve stimulation might be an option. These criteria include an apnea hypopnea index (AHI) between 20-50 (later widened to AHI 15-65), BMI <32 (later up to 35), no concentric collapse at the level of the palate (CCcp), during drug induced sleep endoscopy (DISE), and less than 25% mixed and central apneic events. For patients with moderate to severe sleep apnea who are intolerant for CPAP therapy, who fulfill certain strict criteria, N. hypoglossus nerve stimulation might be an option. This system has three internal components: a sensor lead, an implantable pulse generator and a stimulation lead, connected with wires. Patients start their therapy every night again their remote control. While in the past three incisions were needed, presently only two small incisions suffice. The surgery is now usually performed in day care. Operating time is down to approximately 1,5 hrs. As per
March 2022, more than 16,000 patients have been operated worldwide. The most recent study is by Bosscheiter et al; Boschieter has shown in a group of almost 2000 patients in the ADHERE registry, that the effect is similar in patients in different disease severity categories: the effect is very comparable in patients with an AHI of 5-15, 15-30, 30-50, 50-65 and > 65. Earlier work by Suurma et al had already shown that patients with a BMI between 32-35, do not worse than patients with a BMI<32. The conclusion is that UAS is effective and safe, while the originally strict indications are gradually abandoned.

Introduction to bilateral hypoglossal nerve stimulation therapy (Genio system) for obstructive sleep apnea

For patients with moderate to severe sleep apnea who are intolerant for CPAP therapy, who fulfill certain strict criteria, N. hypoglossus nerve stimulation might be an option. While the most experience is with the Inspire system, a second n. hypoglossal stimulation system is also of interest. The Genio system of the company Nyxoah is a bilateral hypoglossal nerve stimulation therapy. The mechanism is fundamentally different. Only one incision is needed, under the chin for implantation of the internal stimulator, which stimulates the n. hypoglossal nerve at both sides. It is minimally invasive, leadless and battery free, full body 1,5 and 3T MRI compatible, indicated for both non CCCp and CCCp patients. The neurostimulator implant is independent from the external power unit, and provides bilateral cyclical hypoglossal nerve stimulation. By means of an external disposable patch, patients put on the external component which contains the activation chip and battery, every night. After sleep, the activation chip is detached and plugged into a charging Unit. The activation chip is fully charged in a few hours. The patient’s breathing frequency is used as a reference to adjust the stimulation cycle. Presently several trails are ongoing with the Genio system. In the BETTER SLEEP study, 43% of the study cohort were CCCp patients. Preliminary results show similar effects in CCCp and non CCCp patients.

Concepts for endoscopic surgery for tumours of the nose and the paranasal sinuses

Hans Rudolf Briner, MD
Klinischer Dozent, ORL-Zentrum Klinik Hirslanden, Witellikerstrasse 40, CH-8032 Zurich, Switzerland

Abstract –
Endoscopic surgery for tumors of the nose and paranasal sinuses is challenging. A systematic approach helps to perform a safe and efficient treatment: A precise diagnosis with adequate imaging and a biopsy of the lesion is the base of the treatment concept. The bimanual endoscopic technique helps to control bleeding and to dissect the tumor. A wide approach with exposure of known anatomical landmarks helps to control dissection of the tumor. In extensive cases involving the brain, the orbit or the infratemporal fossa, an interdisciplinary team approach is to consider.

Abstract –
Endoscopic approaches to the frontal sinus: From Draf 1-3

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Surgery of the frontal sinus is challenging due to the narrow and complex frontoethmoidal anatomy with various anatomical variations. The most common indication for frontal sinus surgery is chronic rhinosinusitis which is not sufficiently controlled by adequate medical therapy. Further indications are tumors involving the frontal sinus and approaches to the frontal skull base. The extent of surgery depends on the pathology of the frontal sinus. It ranges from balloon sinuplasty to the frontal median drainage procedure according to Draf 3. The workshop focuses on frontal sinus anatomy and surgical steps including the frontal sinus median drainage procedure.

Middle Turbinate Handling In ESS : Revisiting The Concepts.

Dr Ashraf Elzeiny
ENT consultant Mansaura Health Insurance Hospital

Abstract :
The middle turbinate is a structure which is usually preserved during ESS for preserving its physiological and anatomical role whatever it's resection is an acceptable procedure in some situations as it may involved in the inflammatory process, obstruction, and sometimes it is unstable. Many studies support this concept whatever the proper handling of MT still the key to avoid the operative and the post operative complications and ensuring a successful and fruitful surgery

Frontal sinus fractures with suspected outflow tract obstruction anew approach for sinus reservation

Mohamed Salah
Zagazig University

Abstract
Objective: The description of a new approach for the management of patients with frontal sinus fractures and associated obstruction of the frontal outflow tract to, restore sinus function and avoiding sinus obliteration.
Subjects and methods: In a prospective study, 21 patients with anterior wall frontal sinus fractures associated with potential obstruction of the frontal outflow tract, underwent rigid internal fixation and intraoperative guarded nasal endoscopic debridement of any bony spicules and lacerated mucosa to clear the frontal recess. Patients were followed up clinically and radiologically by CT to assess the status of the frontal sinus and to detect any manifestations of frontal sinusitis or any other complications.
Results: Seventeen patients completed the postoperative follow-up while four patients were excluded from the study. Postoperative follow-up ranged from 6 to 34 months with a mean of 20 months. All patients had associated craniofacial fractures. Follow-up CT scans showed complete restoration of frontal sinus ventilation and mucociliary clearance for 13 patients. Four patients showed frontal sinus mild mucosal thickening without signs of chronic sinusitis.
Conclusion: Patients with anterior wall frontal sinus fractures associated with frontal sinus outflow tract obstruction could be successfully managed with rigid internal fixation and intraoperative guarded endoscopic debridement of any bony spicules and lacerated mucosa to clear the frontal recess. This type of management could increase the chance of frontal sinus preservation and decrease the need for frontal sinus obliteration for similar patients.

Endoscopic repair of bilateral choanal atresia

Ashraf Kasem
Alexandria University

Choanal atresia is a rare congenital disorder where the posterior nasal cavity is narrowed and eventually causes difficulty breathing. Unilateral atresia is less serious than the bilateral type because the child will still be able to breathe from one nose opening. Choanal atresia has an incidence of about 1 in 7000 births, mostly in females. There are 5 types
of choanal atresia repair: transpalatal, transnasal, sublabial transnasal, transantral, and transseptal approaches. Transpalatal and transnasal have been the most popular in the last several decades with transnasal becoming the preferred technique due to the improvement of endoscopic instruments and techniques. We would like to present a case of an endoscopic choanal atresia repair.

Mucosal lesions during SARS-CoV-2 infection: a Case series and literature review

Mohamed Shehata Taha, Prof. ORL-HNS
Ain Shams University Hospitals

The most common manifestations of infection with covid-19 are fever, sore throat, dry cough, headache, and body aches. The available evidence for successful and safe pharmacological therapy against COVID-19 has not yet been identified, and the possible evidence relates to many adverse reactions. Taste disorders, petechiae, desquamative gingivitis, unspesific oral ulcers, xerostomia, and candidiasis are the oral manifestations related to SARS-CoV-2 infection. We reviewed the literature regarding the reported mucosal lesions in cases with confirmed Covid-19 infection together with presenting five cases with oral mucosal lesions associated with covid-19 infection. Direct causal association between Covid-19 infection and mucosal lesions is still vague, hence further research is required.

Abdel Wase Al Aql, Yemen

As we know nasal meningoencephalocele must be respected carefully and the skull base defect repaired in an underlay manner. To achieve this bipolar diathermy was widely used to devitalise the herniated brain tissue. Use of coblation in management of nasal meningoencephalocele has many advantages. It offers a double hands in stead of 4 hands surgery in case of bipolar diathermy The coblation probe can do ablation, coagulation, suction and irrigation in the same time This makes surgery easier, safer and faster

Optimizing rhinoplasty outcomes

Yasser Elbadawy, Ministry Of Health

Introduction: Rhinoplasty remains one of the most challenging operations performed by plastic surgeons. The complexity lies in the ability to have a consistent and predictable aesthetic result. The unpredictability is mainly attributable to the interplay of manipulated internal structures and wound healing dynamics. In addition, setting realistic expectations with the patient is essential for achieving high postoperative patient satisfaction. An open rhinoplasty approach enables an accurate and in-depth evaluation and intervention. Material and Methods: A retrospective analysis of 89 patients who underwent rhinoplasty during 2017 to 2019. Follow up after 12 and 18 months. Surgical outcomes and aesthetic satisfaction rate were evaluated in deferent age groups, genders, and educational levels. Results: The most common satisfaction factors among patients in this study were (nose feel more natural) and the tip rotation. Furthermore, the most common cause of dissatisfaction in patients were (nose too wide) in 8% of patients.

Conclusion: Careful patients selection, Precise preoperative Aesthetic nasofacial analysis, and decision making will lead to consistent, predictable, functional, and aesthetic results.

Post Covid-19 acute invasive fungal rhinosinusitis: overview and management algorithm

Ismail Alnashar
Zagazig University

Acute invasive fungal rhinosinusitis (AIFRS) is a rare but fatal disease. Patients affected by or recovered from Covid-19 are at increased risk of developing acute invasive fungal rhinosinusitis (AIFRS). In this work, the relationship between Covid-19 infection and AIFRS is highlighted. An overview of diagnosis and management of this morbidi condition is discussed. A suggested algorithm for management of cases of post Covid-19 AIFRS is provided, including admission criteria of patients to the responsible departments; with clarifying the role of each department as part of the multidisciplinary team.

Trans-oral endoscopic Radiofrequency adenoidectomy

Mohamed Aouf
Kafrelsheikh university

Aim: This study compared the efficacy and safety of conventional adenoidectomy using a curette and the Radio-frequency (RF) adenoid ablation using endoscope via the trans-oral technique. Methods: A randomized prospective comparative study was conducted in a tertiary care hospital. The study included 80 patients with a diagnosis of adenoid hypertrophy, which was confirmed by X-ray of a lateral view of the skull. The patients were submitted into two groups 40 for each: curettage group and Radio-frequency group. Patients with bleeding diathesis, congenital anomalies, previous adenoidectomy, and morbid illness were excluded from the study. We evaluated the time consumption, the adenoid tissue remnant by the endoscope, blood loss, and clinical correlations like pain by Visual Analog Scale, halitosis, and secondary bleeding in both study groups. Results: Intra-operative blood loss was 20–40 ml in the Radio-frequency (RF) group, but in the curettage group was 36–55 ml. Postoperative pain in the (RF) group was lower than the curettage group. Secondary bleeding was reported mostly in the curettage group (15%). The duration of the operation in (RF) group was relatively long. Halitosis decreased mainly after curettage adenoidectomy. Conclusion: The endoscopic radio-frequency adenoidectomy surpassed the conventional method.

Endoscopic Endonasal Transpterygoid Approaches

Endoscopic Endonasal

Hossam Elbosraty
Cairo University

Transpterygoid approaches (EETA) imply a corridor that transgresses the pterygoid process. The paired pterygoid processes comprise medial and lateral plates that descend perpendicular from the body of sphenoid bone and fuse at their anterior cephalic aspect, the pterygoid process base. This corridor can be extended, guided by important
landmarks (e.g., vidian canal, foramen rotundum). Due to important anatomical relationships, infratemporal fossa (lateral), pterygopalatine fossa (anterior), eustachian tube and fossa of rosenmüller (posterior), and middle cranial fossa (superior), a partial or complete removal of the pterygoid process (i.e., transpterygoid approach) is a common step to an endonasal endoscopic access to the infratemporal, middle, and posterior cranial fossae. Endoscopic endonasal transpterygoid approaches were first described to provide access to the lateral recess of the sphenoid sinus. Recent advances in surgical techniques and technological resources in the field of endoscopy have enabled the use of endoscopic endonasal transpterygoid approach to access the foramen lacerum, petrous ica, meckel's cave, cavernous sinus, lateral nasopharynx (fossa of rosenmüller) and infratemporal fossa. In this presentation, we demonstrate the value of this approach as one of the endonasal skull base corridors.

Changes in Serum Leptin Level After Multilevel Surgery in Patients with Obstructive Sleep Apnea

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Otolaryngology Head and Neck Surgery, Zagazig University, Egypt

Abstract
Objective: Leptin hormone plays an important role in metabolic control and is elevated in obstructive sleep apnea (OSA). The aim of this study was to assess the hypothesis that surgical treatment will reduce leptin levels in OSA patients.

Study Design: Prospective study.

Subjects and Methods: Twenty-three patients with multilevel OSA underwent modified genioglossus muscle advancement with anterolateral advancement pharyngoplasty between April 2018 and September 2019. Serum leptin level was measured preoperatively and 3 months postoperatively for all patients and 18 control subjects. All patients were evaluated before and 3 months after surgery by history taking, clinical examination, polysomnography, cephalometry, and Epworth Sleepiness Scale.

Results: Preoperatively, patients with OSA had a higher Leptin level (18.46 ± 4.73 ng/mL) than did control subjects (7.07 ± 1.26 ng/mL) (P < .001). Surgery resulted in a significant reduction in the level of leptin from 18.46 ± 4.73 ng/mL to 8.03 ± 2.22 ng/mL (P < .001). Reductions in leptin level was correlated with changes in apnea hypopnea index (AHI) and minimum oxygen saturation (SaO2).

Conclusion: Effective multilevel surgery in the form of modified genioglossus muscle advancement with anterolateral advancement pharyngoplasty could significantly reduce leptin level in OSA patients and this reduction is correlated with the degree of OSA improvement in terms of AHI and SaO2.

Key Words: Serum leptin, multilevel obstruction, obstructive sleep apnea, genioglossus advancement, pharyngoplasty.

Management of mucormycosis in covid 19 era

Ahmed Sweed
Zagazig University

Acute invasive fungal sinusitis (AIFS) is a rare disease affecting immunocompromised patients with high mortality rate (50%–80%).1 AIFS is usually due to Aspergillus or Zygomycetes species. These fungal spores are inhaled and germinated within the nose and paranasal sinuses; then fungal hyphae invade submucosal blood vessels leading to vasculitis and tissue necrosis. Either direct or vascular extension may occur leading to advanced condition (rhino-orbito-cerebral mucor mycosis).2 In Covid-19 era, incidence of AIFS has increased without explanation, may be due to immunosuppressed state, high ferritin level associated with SARS-CoV-2, and prolonged hospitalisation with excessive steroid and oxygen therapy utilisation; in addition to standard risk factors for AIFS.3 Any refractory sinus manifestation with orbital complications (visual defect, proptosis and ophthalmoplegia) should be investigated for possibility of AFIS especially in high risk patients by nasal endoscopy, radiology and biopsy.4 Early diagnosis and management are the key consideration to minimise mortality rate. Mortality rate discrepancy in between studies may be due to different variables as reversibility of immunocompromised state, virulence of fungi, stage of invasive fungal infection, compliance with antifungal medications and surgical debridement (when to interfere, debridement efficacy).4,5 In this study, MRI findings in AIFS patients, recently recovered from Covid-19, were assessed and correlated with intraoperative findings to evaluate predictability of MRI for severely fungal affected tissues beyond scope of ordinary endoscopic sinus surgery.

Anatomic variations of sphenoid sinus and related structures by CT scan in a sample of Egyptian population

Samia A. Fawaz, (MD), Anas Askoura, (MD), Mohamed Ali
Ain Shams University

Abstract
Our objective is to study the radiological variations of sphenoid sinus; in a sample of Egyptian population.

Patients and methods: Our study included assessment of CT PNS of 500 subjects (1000 sides) without any Sino nasal symptoms or signs or radiological findings suggestive of any sphenoidal diseases.

Results: As regard pneumatization of SS, the commonest variation is sellar (63%) then postellar (22%) then presellar (15%), conchal (0%). With extension to anterior clinoid process in (9.5%) while the lateral extensions into the lesser and greater sphenoidal wings was (7.1%) Onodi cell was found in 20%, As regard intersphenoid septum, it was midline in (39%), deviates to left side in (42%), and deviated to right side in (19%), and it was attached to the optic nerve canal in 13% and to bone over ICA in 7%. The most common type of optic nerve canals relation to SS was type 1(62%) followed by type 2 (15%), type 3 (13%) and type 4 (10%). Optic nerve was dehiscent in 4% The ICA showing bulging in 40%, but dehiscent bony wall in 2%.

Conclusion: A detailed knowledge of the anatomical variations of SS and its relations preoperatively is crucial for preventing unintentional damage to vital structures which can result in sever complications.

Abstract of Nasal Tip Rotation :Talat El samny (MD).
Talaat Elsamny
Ain Shams University

Nasal tip may be downly or upwardly rotated. Correction of downly rotated nose or droopy nose requires wedge resection of caudal end of nasal septum to shorten nose associated degree of nasal tip projection (Underprojected, overprojected or normally projected nose). In cases of normally projected nose, columellar strut and suturing techniques were used. Suturing techniques include transdomal suture.
Diode laser-assisted inferior turbinoplasty in resistant cases of allergic rhinitis: a clinical and histopathological study

Nasir Naguib
Zagazig University

Abstract:
Objective: Chronic nasal obstruction owed to inferior nasal turbinate hypertrophy is one of the most common problems encountered in rhinology. When medical management fails, surgical reduction of hyperplastic inferior nasal turbinate is often used. Diode laser is appropriate for the use in the nasal turbinate. This study was designed to define the histopathologic changes in the inferior turbinate post diode laser turbinoplasty and evaluate the outcome in patients having allergic inferior turbinate hypertrophy that has not responded to the medical treatment.

Materials and Methods: A prospective single cohort study was carried out. Under general anesthesia, 18 patients underwent inferior turbinoplasty using diode laser 980 nm in the contact mode submucosally under guidance of 4-mm nasal endoscope. Inferior turbinate mucosa biopsy specimens were taken at the time of surgery and after 3 months and were histopathologically examined with assessment of the patients’ symptoms.

Results: Three-month postoperatively, histopathologic assessment demonstrated marked structural changes in diode laser-treated inferior turbinate including the predominance of fibrous tissue with diminution of seromucinous glands, venous sinusoids, and inflammatory cell infiltrate. Concurrently, 16 patients (89%) had no nasal obstruction, 15 patients (83%) had moderate to good improvement of rhinorrhea, whereas 13 patients (72%) had moderate to good improvement of sneezing.

Conclusion: Diode laser produces histopathologic changes in the inferior turbinate soft tissues, providing excellent ablation of the soft tissue with controllable performance and good hemostasis. Therefore, it is a safe, minimally invasive, and effective procedure in relieving nasal obstruction secondary to inferior turbinate hypertrophy as well as other symptoms of allergic rhinitis.

Keywords: Diode laser, Allergic rhinitis, Inferior turbinate hypertrophy

Sphenoid’s lateral recess recurrent CSF leak; a challenging case

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Aim: How to approach the far lateral areas of the sphenoid in this challenging case to access and repair a CSF leak.

Methods and results: A middle-aged female patient presented with recurrent CSF leak from the right side pneumatized sphenoid lateral recess. Initially, she underwent repair by ENT surgeon using right side nasoseptal flap, however, the patient presented soon after the surgery with a recurrent leak and temporal lobe abscess. She underwent drainage of the abscess and repair of the defect by neurosurgeons using fat grafts but, unfortunately, this did not stop the leak. Finally, the patient underwent a joint ENT-Neurosurgery operation to repair the leak endoscopically through transpterygoid approach using fat and contralateral nasoseptal flap which successfully stopped the leak.

Conclusion: Leaks from the lateral recess of the sphenoid can be repaired endoscopically, yet, the approach is quite challenging. Using multilayer repair and vascularized flap in addition to the combined ENT-Neurosurgery work can improve the outcome.

Orbital complications of sinusitis

Ahmed Elzehzahy
Mansoura University

Aim: To highlighten spot on complications of sinusitis

Methods and results: survey was made on 40 cases of rhinogenic orbital complications (from January 2019 to January 2022) the patients ranged in age from 4 months to 40 years old with orbital swelling

Conclusion: early diagnosis the complications of sinusitis allow low morbidity and mortality

Keywords: sinusitis _orbital _children
Management options for unilateral choanal atresia: An Update
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Unilateral choanal atresia is diagnosed clinically and by imaging. Other examination depends on the risk factors and presentation. Imaging includes CT scan multiplanar reconstruction, sometimes with dye intranasally.

In absence of airway distress, surgery is done after the age of 6 months (> 5 Kg). If the passage of endoscope and instruments is not possible, transpalatal or combined approach is used.

The endoscopic technique (nasal or retropalatal), with or without powered instrumentation, offers excellent visualization, great ease in removing the bony choanae.

Combined transoral-transnasal approach allows 4-handed surgery. In the combined transoral-transnasal approach, 120-degree rigid telescope and palate retractor are used.

Other options include balloon dilatation, LASER assisted procedures (carbon dioxide and potassium titanyl phosphate (KTP) lasers, and surgery with CT-Image Guidance. The transseptal approach and sublabial approach are rarely used. Recently, the use of bioabsorbable steroid-eluting stents is suggested.

The transnasal approach may be done with the endoscope, the microscope or blindly (assisted with the use of 120-degree telescope transorally). Powered instruments (microdebrider and diamond burr drills) are helpful. Sheathed instruments are essential to avoid damage of the mucosa.

We adopted the cross-over U-shaped flap technique in 9 patients with avoidance of use of stenting and with no post operative restenosis.

Olfactory and gustatory dysfunction-a comparsion between omicron and previous variants
Ibtisam Mohammad
Turkya

Aim : Olfactory dysfunction is common in coronavirus disease 2019 (COVID-19) patients. The aim of this study is to compare the incidence of subjective olfactory and gustatory disorder in patients with laboratory-confirmed COVID-19 of earlier variants to those with presumed later omicron variant .

Methods and results: In a previous cross sectional study by E. Deniz Gozen, et al. of 59 laboratory-confirmed COVID-19 infected patients identified January 13 - 14, 2022 during a time when reports showed 97% of Turkish infections were omicron variant. Screening them by a questionnaire for olfactory and gustatory dysfunction, we found that the rate of self-reported smell and taste loss in all COVID-19 patients was 52.5% and 42%, respectively, a rate similar to reports from other centers. We contacted 200 laboratory-confirmed COVID-19 infected patients between April 10 and May 10, 2020 screened by questionnaire for olfactory and gustatory dysfunction, we found that the rate of self-reported smell and taste loss in these patients was 37(18.5%) and 35 (17.5%), markedly lower than COVID-19 reports.

Conclusion: Olfactory and gustatory dysfunctions are common in COVID-19 patients, however with decreased prevalence in the new omicron cases.

Thornwaldt cyst as an unusual cause of nasal obstruction
Mohamed Abd Elbary, Zagazig University

Aim: to demostrnate the clinical presentations and endoscopic removal of giant Thornwaldt cyst as a case report .

Methods and results: A 54 years old male presented with persistent nasal obstruction, nasal tone, ear block, and autophony 3 months ago. Diagnosis was confirmed by CT and MRI. Endoscopic nasal marsupilization and excision was done using zero degree rigid endoscope, bipolar cautery and microdebrider. Histopathology confirmed the cyst as Thornwaldt cyst.

Conclusion: Although relatively rare, Thornwald should be suspected in any patient complaining of unexplained sinonasal symptoms. Endoscopic surgical excision is a safe and effective maneuver with no cyst recurrence.

The role of topical versus systemic antibiotics in the treatment protocol of chronic rhinosinusitis without nasal polyps in adults By
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Shebin elkom teaching hospital

ABSTRACT
The etiology of CRS is multifactorial. Narrow clefts and decreased mucociliary clearance have been suggested, for a long time, as the corner stone of the pathophysiology of CRS. Recently, the immunological status of the patient is also focused on. CRS is divided into two types: 1) chronic rhinosinusitis without nasal polyp (CRSsNP) & 2) chronic rhinosinusitis with nasal polyp (CRSwNP). In the present study, we compare the efficiencies, bacteriological eradication and cost of ciprofloxacin (systemic/topical) in adult patients with CRSsNP. 40
patients are included in this study (classified into two groups equally). A different form of ciprofloxacin is used in each group (systemic for group I and topical for group II). Our aim is to evaluate the role of topical versus systemic antibiotics in the treatment protocol of CRSsNP in adults. Our results revealed that the clinical cure rate was slightly higher in group I than that of group II. However, the bacteriological eradication was lower in group I than that of group II. The cost of antibiotic course was much less in group II compared to that of group I. In conclusion, topical antibiotic treatment of CRS proved to be as valid as systemic antibiotic. It is safe and cost effective. These results justify the use of topical antibiotics as an alternative therapeutic modality to systemic antibiotics with much less adverse effects.

Updated Pharyngoplasty in the management of OSA
Mohamed El Deeb
Kaf El Sheik University

Abstract:
Introduction: A total or partial obstruction of the upper airway is the cause of obstructive sleep apnea syndrome (OSAS). Materials and Methods: Two published papers studied version 6 of Cahali lateral pharyngoplasty. We analyzed the data of work to assess if the new technique can be used as a stand-alone procedure for the treatment of OSA patients, regardless of the degree and pattern of airway obstruction.

Results: The results showed that 28 (70%) of the operations were effective, whereas 12 (30%) were unsuccessful. In comparison to preoperative data, the postoperative Stop Bang score, AHI, and snoring index were significantly lower (p-value 0.001); nevertheless, minimal SpO2 and baseline SpO2 were significantly higher. Patients with a high preoperative snoring index, lateral wall hypopharyngeal collapse, high tongue collapse, laryngeal collapse, tongue palate interaction, and low-grade tonsils (1, 2), on the other hand, are more likely to have the surgery fail (p-value = 0.006, 0.024, 0.047, respectively).

Conclusion: In the absence of lateral wall collapse at the level of the hypopharynx (LH), high tongue base collapse (TH), laryngeal collapse (L1), or tongue palate interaction, the novel Cahali lateral pharyngoplasty can be employed as a stand-alone treatment. The absence of laryngeal collapse (L0) is a strong predictor of operation success. Preoperative low-grade tonsils (1, 2) and a high snoring index, on the other hand, predict surgery failure.

Repair of nasal septal perforation using temporalis fascia graft and a unilateral flap - case report.
Sayed Ashour
Balteem Specialized Hospital

Septal perforations, and large ones in particular, are difficult problems to solve. The aim of this work is to use a unilateral monopedicle flap with temporalis fascia to repair nasal septal perforation. Through transcolumellar external approach, left side of the nasal septum was dissected, leaving the right one intact. A posterior-hinged monopedicled mucoperichondrial and mucoperiosteal advancement and rotational flap obtained from the nasal septal axis, nasal floor and inferior meatus was used. Dried temporalis fascia graft was put on either sides of the left flap and fixed by transseptal sutures. A columellar strut was put to support the tip then closure. Afterwards, silastic sheets was put on both sides for three weeks. Complete healing of both sides of the septum occurred within three weeks. The open (external)
surgical techniques, using advancement mucoperichondrial and mucoperiosteal flaps, with a connective tissue support, offer the highest closure rates of septal perforation and the best physiological results that are more acceptable to patients. From review of literature and surgical results; it is shown that the temporal fascia might have an important role in healing process of nasal septal defect on which epithelization occurs faster.

Unilateral Nasal Mass Case Report of Septochoanal Polyp
Osama Fathy, Abd-Elhak Besmar.M.B.B.Ch, MSc.MD.(O.R.L.H.N.S) Dr Al-Azhar University, Fellow of E.N.T at Sheben Elkom Teaching Hospital

- Septochoanal polyp that originates from the mucosa of the nasal septum and extends into the choana is relatively rare. Various histologic changes, such as epithelial atypia and squamous metaplasia may occur in the respiratory epithelium covering nasal polyps.
- Nasal polyps are the most common expansile lesions in the nasal cavity. They are formed by accumulation of fluid in the deeper lamina propria of the Schneiderian mucosa. Almost all nasal polyps originate from the mucosa of the lateral walls of the nasal cavity or from the paranasal sinuses.
- Septochoanal polyp is a rare entity that originates from the mucosa of the nasal septum with choanal extension. Septochoanal polyps are benign, unilateral, and invade the posterior nasal cavity through the nasopharynx. The most common site of their origin is mainly the superior aspect of the posterior portion of the nasal septum.
- The typical symptom of nasal polyp is unilateral nasal obstruction. Occasionally, patients present with bilateral nasal obstruction, anosmia, and headache.
- Detection of the polyp origin by nasal endoscopy is important for the diagnosis of septochoanal polyp.
- However, radiologic examination is useful and essential for the diagnosis of septochoanal polyp.
- A variety of pathologic conditions may mimic septochoanal polyp with metaplastic ossification on CT and MR images. These pathologies include nontumorous conditions such as rhinolith and fungal ball, and tumorous conditions, such as inverted papilloma, chondrosarcoma, osteosarcoma, and fibroosseous lesions.

Polidocanol Injection Snoreplasty : Is It A Safe And Better Alternative To Sodium Tetradecyl Sulfate ?
SV. Manjunatha rao, Prof
India

INTRODUCTION : Snoring occurs due to narrowing and partial obstruction of the upper airway during sleep. There are different kinds of medical and surgical techniques for managing snoring. Injection snoeoplasty is a technique wherein, a sclerosing agent is directly injected into the submucosal layer of soft palate, inducing scarring and fibrosis, thus leading to stiffening of soft palate and reduced vibration. This reduces or eliminates palatal flutter snoring. Polidocanol is one such sclerosing agent with promising efficacy and outcomes.

OBJECTIVE : To study the efficacy of Polidocanol in injection snoeoplasty

METHODOLOGY : This study enrolled 40 patients who came with history of snoring. The snoring was graded using VAS scale. 0.5 mL of 3% Polidocanol with 1.5 mL Normal Saline was mixed and 1mL injected over midline of soft palate and 0.5 mL each paramedially.
CONCLUSION: The advantages of Polidocan injection snoreplasty over current snoring procedures include simplicity, decreased expense, low incidence of side effects, decreased post-treatment pain, and minimal/no convalescence, when compared to sodium tetradecyl sulphate. Injection snoreplasty is a simple, safe, and effective office treatment for primary snoring.

Real life experience with biological treatment
Wytske Fokkens
Netherlands

Primary CRS can be further divided into type-2 and non-type-2 according to the pathophysiology. This pathophysiology concept is called ‘endotype concept’ approach. Example of primary diffuse CRS type 2 are CRS with nasal poly with eosinophilic predominant (CRSwNP/ eCRS), allergic fungal rhinosinusitis (AFRS) and central compartment allergic disease (CCAD). Example of primary diffuse CRS non-type 2 is non-eCRS. The status of eCRS vs non-eCRS can be change overtime. The determination of eCRS vs non-eCRS can be done by 1) Measurement of eosinophilic count in the tissue of sinus and polyp more than 10 per high power field (HPF), or 2) Blood eosinophil higher than 250, or 3) serum total IgE higher than 100.

Recalcitrant rhinosinusitis
Pongsakorn Tantilipikorn, MD PhD
THAILAND

Rhinosinusitis can be categorized into acute rhinosinusitis (ARS) and chronic rhinosinusitis (CRS).

According to the the European Position Paper of Rhinosinusitis and Nasal Polyp (EPOS) 2022, the CRS is categorized into primary CRS and secondary CRS.

Primary CRS can be further divided into type-2 and non-type-2 according to the pathophysiology. This pathophysiology concept is called ‘endotype concept’ approach. Example of primary diffuse CRS type 2 are CRS with nasal poly with eosinophilic predominant (CRSwNP/ eCRS), allergic fungal rhinosinusitis (AFRS) and central compartment allergic disease (CCAD). Example of primary diffuse CRS non-type 2 is non-eCRS.

The status of eCRS vs non-eCRS can be change overtime. The determination of eCRS vs non-eCRS can be done by 1) Measurement of eosinophilic count in the tissue of sinus and poly more than 10 per high power field (HPF), or 2) Blood eosinophil higher than 250, or 3) serum total IgE higher than 100. Despite the ‘appropriate medical therapy’ (AMT) according to the endotype (steroid for eCRS and macrolide for non-eCRS), many CRS patient cannot achieve the status of under-controlled. The novel promising therapeutic option for this ‘refractory’ group of CRS is biologics option. Several biologics are available for the refractory CRS, such as omalizumab, mepolizumab, dupilumab and benralizumab. The current recommendation for this kind of treatment are: 1) uncontrolled CRSwNP (long term intranasal steroid or at least one course of oral corticosteroid and/or previous sinus surgery), or 2) severe CRSwNP (larger than medium size of polyp with severe symptoms).

Microdebrider Assisted Inferior Turbinoplasty, How I do it, technique, procedure and results
Nasser Salama
KSA

Abstract
Surgical treatment of the inferior turbinate’s is required for hypertrophic inferior turbinate’s refractory to medical treatments. The main goal of surgical reduction of the inferior turbinate is to relieve the obstruction while preserving the function of the turbinate. There have been a variety of surgical techniques described and performed over the years. Irrespective of the techniques and technologies employed, the surgical techniques are classified into two types, the mucosal-sparing and non-mucosal-sparing, based on the preservation of the medial mucosa of the inferior turbinate’s. Although effective in relieving nasal block, the non-mucosal-sparing techniques have been associated with postoperative complications such as excessive bleeding, crusting, pain, and prolonged recovery period. These complications are avoided in the mucosal-sparing approach.

About 150 cases I did in the last 3 years by endoscopic microdebrider assisted turbinoplasty to relive the nasal obstruction due to enlarged inferior turbinate’s especially in patients with perennial allergic rhinitis and deviated nasal septum not responding to medical treatment.

Conclusion: MAIT with lateralization appear the most effective and minimally invasive methods to relive nasal symptoms and decreasing the total nasal resistance either in anterior, middle and posterior parts of the nasal cavity for short- and long-term effect.

Dr. Nasser Salama
Consultant otolaryngology, MSc, DOHNS (MRCS), Arab Board, Egyption Fellowship, European fellowship (Board) Otorhinolaryngology H&N Surgery

Effect of Modified Genioglossus Advancement on Hyoid bone Position: Cephalometric Study
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ABSTRACT
Objective: To assess Hyoid bone position and retrolingual airway space after Modified Genioglossus Advancement Surgery by cephalometry in patients with obstructive sleep apnea (OSA).

Study Design. Prospective study.

Setting. Zagazig University Hospital.

Methods: Eighteen patients with moderate to severe OSA having multilevel airway obstruction confirmed by fiberoptic endoscopy during Muller’s maneuver and DISE. All patients underwent modified genioglossus advancement surgery associated with antrolateral advancement pharyngoplasty. Beside Polysomnography and Drug induced sleep endoscopy. Cephalometry was done preoperatively and 6 months postoperative.

Results: Improved Polysomnography parameters as Postoperative mean±SD apnea hypopnea index decreased from 52±17.1 to 17±3 (P<.001, 95% confidence interval 27.71 to 42.41). LOS increased from 79.89±4.43% to 83±4.05% (P 0.07, 95% confidence interval -0.31 to 6.97).

Cephalometry analysis showed a significant difference between pre- and postoperative findings, including: Retrolingual airway space at three levels significantly increased; Level 1 from 6.1±1.6 to 8.5±1.7, Level 2 from 10.5±2.4 to 13.9±2.1, Level 3 from 15.7±3.1 to 21±4, H-GN decreased from 51±7 to 39±8, H-MP decreased from 31.6±7.7 to 24.9±7.3, H-S decreased from 121±15 to 102±12, H-PH increased from 29±8 to 43±9. With a success rate defined as AHI <20 and a 50% decrease in AHI of the preoperative value, the surgical success rate was 83.33%.

Conclusion: This study showed that Modified genioglossus advancement procedures done for OSA patients significantly changed the position of hyoid bone into a more anterior and superior position and this was reflected in the postoperative Polysomnography.

Keywords: Obstructive apnea; Cephalometry; modified genioglossus advancement

Oral myofunctional therapy in obstructive sleep apnea: Does it work

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Abstract

Background: (OSAS) represents one end of a spectrum with normal quiet regular breathing at one end, moving through worsening levels of snoring, to increased upper airways resistance, and to hypopnoeas and apnoeas at the other end, and inspite of presence of surgical, pharmacological and non pharmacological treatment methods for treatment still many patients are in need for an alternative simple, safe an cheap methods to improve their life style, OMT may do.

Aim of the work was planned to evaluate the value of OMT for treatment of patients with mild to moderate OSAS patients and methods: Fifteen patients with mild to moderate OSAS were enrolled and subjected to, thorough history taking with stress on symptoms of OSAS (snoring, fragmented sleep, witnessed apneas, morning headache and daytime sleepiness), calculation of Epworth sleepiness scale and body mass index (BMI), Physical examination including neck circumference, vocal tract, mouth and larnx beside full night polysomnography for objective diagnosis of OSAS pre and post 3 months of OMT.

Results: There was a statistically significant reduction of apnoeae index (AHI) and arousal index post OMT compared to pre therapy (p < 0.001 for all). Desaturation index also statistically improved when comparing pre and post OMT (p < 0.001).

Conclusion: OMT can achieve subjective improvement in OSAS symptoms as well as polysomnographic profile in patients with mild to moderate degree of obstruction and it could be adopted as one of the adjuvant therapeutic modalities in treatment of OSAS

Key words: Myofunctional therapy- Obstructive Sleep Apnea Syndrome- snoring

Diffusion tensor imaging a smart move to olfactory pathway imaging: a comparative study of chronic sinonasal polyposis patients and normal control

Heba Mahmoud
Ain Shams University

Aim: This study assessed the value of volumetry and DTI parameters as objective measurements for olfactory dysfunction. Methodology: Fourteen patients with chronic sinonasal polyposis for at least 6 months were included in this study; all of them underwent tailored MRI examination including volumetry and DTI for olfactory bulbs and tracts. The results were compared to the same number of age and sex-matched healthy control group. Results: The study results showed that olfactory bulb and tract (OB/T) volume, FA and ADC could distinguish between patients and healthy controls. Statistically significant differences were noticed between the FA & ADC values of patient and control groups (p < 0.05) and a highly significant one was noticed as regarding the OT volume (p < 0.001). Conclusion: MR volumetry and DTI parameters can be used as objective measurements for the olfactory dysfunction for patients with chronic sinonasal polyposis.

The maxillary sinus: The underdog paranasal sinus

Mohamed Tamoun, Tanta University

Introduction: Chronic rhinosinusitis (CRS) is a common disease with a significant impact on the quality of life (QOL) of affected patients. Due to its increasing prevalence, CRS is associated with a significant socioeconomic burden. Due to its dependent position and mucociliary transport against gravity, acute inflammatory process within the maxillary sinus is more likely to become chronic and persistent if there is no appropriate therapeutic intervention. Endoscopic sinus surgery of the maxillary sinus is reserved for those patients with failed medical therapy or for those patients with no benefit for the medical treatment (e.g. maxillary fungal rhinosinusitis, antro-choanal polyp). There are many reasons for persistent maxillary sinus symptoms after endoscopic sinus surgery, including recurrent disease (inadequate post-operative cavity debridement, inadequate post-operative medical care, environmental factors "e.g. air pollutants, allergens", host factors "immunodeficiencies, primary ciliary dyskinesia"), persistent disease (failure of the middle meatal antrostomy from communicating with the natural ostium, incomplete removal of the maxillary sinus pathology), and involvement of bones like metastasis. Associated with renal failure, hyperparathyroidism

Patients and methods: 4 patients had been studied in zagazig university otolaryngology department

Results: all patients had renal failure hypercalcemia hypophosphatemia hyperparathyroidism and positive radiological sings in the head .Removing parathyroid and the tumor ,decompression of optic nerve, or otic capsule or 5th or vagal branches in addition of carotid arteries were challenging tasks in all patients as regard selection of time of operation between dialysis sessions ,selection of anesthesis, care of bleeding ,risk of surgical trauma, packing, post operative antibiotics, analgesic coagulant

Conclusion: The brown tumor is a bone lesion that arises in settings of excess osteoclast activity, such as hyperparathyroidism renal failure. They are a form of osteitis fibrosa cystica. It is not a neoplasm, but rather simply a mass when compressing vital site it needs to be removed which is a risky task

Brown tumor of the head by

Magdy Abdullah, Zagazig University

professor of otorhinolaryngology zagazig university egypt

Introduction and aim of the work: to raise mind to problematic disease Brown tumor is a non neoplastic process the lesion mostly is multifocal

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ARS-CoV-2 Olfactory Dysfunction; prevalence, outcome & associated ENT manifestations

Mohamed Salah Mahmoud
Ain Shams University

Background: The prevalence of Olfactory/gustatory dysfunctions among hospitalized SARS-CoV-2 infected patients is highly variable between different studies, ranging from 5.6% in the Asian population to 86% in the European population. The study aimed to detect the prevalence and the recovery of olfactory/gustatory dysfunctions in hospitalized SARS-CoV-2 infected patients in an Egyptian tertiary care center. 579 hospitalized patients were enrolled. Demographic data as well as upper respiratory tract symptoms including olfactory/gustatory dysfunctions, and other risk factors were documented. Then the recovery of olfactory/gustatory dysfunctions after six months was followed up.

Results: 50.6% had olfactory/gustatory dysfunctions (24.2% had total smell and taste loss). logistic regression analysis revealed a statistical significance between olfactory/gustatory dysfunctions and female gender, and presence. Most patients (88.4%) reported partial or complete recovery during the 6 months (28.0%, 60.4% respectively), while 11.6% of patients did not recover. The median time to start recovery was 3 days and the median time to the best recovery was 22 days.

Conclusions: olfactory/gustatory dysfunctions should be recognized for early detection of COVID-19 infection. Most recovery of olfactory/gustatory dysfunction in COVID-19 infection starts within 3 days and reaches the best recovery within 19 to 24 days. Female gender and presence of general symptoms are associated with olfactory/gustatory dysfunctions in the hospitalized COVID-19 patients.

Recalcitrant chronic rhinosinusitis: When should we perform extended sinusotomies or remove mucosa?

Jean Anderson Eloy
USA

Over the past 3 decades, the management of patients with chronic rhinosinusitis (CRS) has evolved from significantly invasive procedures to minimally invasive mucosal-preserving options. Currently, the overwhelming majority of patients with CRS can be treated effectively with appropriate medical therapy (AMT). For patients who failed AMT, the next option is surgical intervention. Initial surgical treatment usually involves endoscopic sinus surgery (ESS) with maximal mucosal preservation; this can be achieved using balloon dilation technology or functional ESS. In cases of failed initial surgical treatment, revision ESS using more aggressive techniques is often undertaken. Nonetheless, a subgroup of patients will go on to fail revision treatment with traditional ESS techniques. In these situations, more advanced surgical procedures may be necessary for extirpation of the disease process. In this lecture, advanced surgical techniques used for the maxillary, ethmoid, sphenoid, and frontal sinuses in patients with refractory CRS who have failed AMT and traditional ESS techniques are described.

Endoscopic multi-corridor resection of angiofibroma: Indications, techniques, and pearls

Jean Anderson Eloy
USA

Juvenile nasopharyngeal angiofibromas (JNAs) are formidable tumors because of their hypervascularity and difficult location in the skull base. Traditional transfacial procedures do not always afford optimal visualization and illumination, resulting in significant morbidity and poor cosmesis. The advent of endoscopic procedures has allowed for resection of JNAs with greater surgical freedom and decreased incidence of facial deformity and scarring. This lecture describes a graduated multiangle, multicorridor, endoscopic approach to JNAs that is illustrated in many patients, each with a different tumor location and extent. Different surgical corridors in varying combinations were used to resect JNAs, based on tumor size and location, including an ipsilateral endonasal approach (un nostril); a contralateral, transseptal approach (binostril); a sublabial anterior maxillotomy approach; and an orbitozygomatic, extradural, transcavernous, infratemoral fossa approach (transcranial). A graduated multiangle, multicorridor approach used in a stepwise fashion allows for maximal surgical exposure and maneuverability for resection of JNAs.

Rhinologist’s Perspective in rhinoplasty: Does it improve the outcome?, Conservalional retrospective and prospective study

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Abstract

Background: Although general plastic surgeons are more than capable of performing rhinoplasty under most, circumstances, they may not always be the best choice depending on the desired outcome. Recognizing concomitant anatomic deformity and Sino nasal disease are crucial to addressing complaints of nasal obstruction. Methods: Retrospective study for rhinoplasty cases done by plastic surgeon and still had nasal and sinus problems. Prospective study done for cases using format assessing the anatomical deformity and Sino nasal disease. prospective study of patients who underwent rhinoplasty and FESS as a team work.

Results: Most of patients seeking rhinoplasty by plastic surgeons had functional problems in the form of nasal obstruction, structural pathology was found in 62% of cases, 54% with septal deviation, turbinate hypertrophy 11%, rhinitis and rhino sinusitis 28%. After recognizing these problems, patients operated by team work had less complaint concerning the nasal obstruction and they did not need readmission or revision surgery.
Conclusion: The prevalence of endonasal structural or mucosal pathology in patients seeking rhinoplasty is high and should not be overlooked. Patients should not breathe worse after rhinoplasty regardless of the indication.

**Endoscopic Endonasal Multilayers Repair Of Cerebrospinal Fluid Rhinorrhea: A Prospective Study**

Haitham Adel Zaki
Alexandria

Abstract

Background: cerebrospinal rhinorrhea (CSF) is due to connection between the extracranial and the subarachnoid spaces. (1,2) Aim and objectives: The aim is to assess the efficacy of endoscopic endonasal multilayers repair of skull base defects in cases of SF rhinorrhea. Patients and methodology: The study is conducted on 100 patients suffering from SF rhinorrhea who are admitted to Alexandria Main University Hospital for operative intervention from January 2018 to May 2021. Result: Endoscopic endonasal multilayers closure of skull base defects is significantly an effective technique. Precise localization of the defect site and size endoscopically and radiologically as well, preoperative high pressure fistula diagnosis and treatment are prerequisites for a successful surgical repair. Conclusion: Endoscopic multilayer repair plays an important role in SF rhinorrhea management; indeed, it decreases the patient morbidity and repair failure incidence rather than the single layer traditional technique repair. Keywords: cerebrospinal rhinorrhea (CSF), endoscopic repair of skull base, multi-layer, repair.

**Easy and safe outside-in frontal drill-out: preclinical anatomic study and clinical implications**

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Background: Draf III frontal sinusotomy is one of the most complex surgical procedures on the frontal sinus. The surgeon can use various landmarks, consisting of foramina, bone grooves and arteries located on the anterior part of the cribiform plate to guide the procedure. The purpose of this technical note is to explain the use of these landmarks to ensure safe Draf III frontal sinusotomy via a medial approach “outside-in frontal drill-out”. Patients and Methods: This study was conducted over 5 years in the Otorhinolaryngology department, Faculty of Medicine, Mansoura University, Egypt. The study started with a preclinical anatomic dissection on 5 dry skulls to identify and standardize the anatomic bony landmarks of this approach. This was followed by a clinical case series which included 20 patients with challenging frontal sinus pathologies that were managed by this proposed approach. Results: The anatomic study of the dry skulls showed that the bony landmarks in the form of cribiformoidal foramen and the nasal process of frontal bone “Spina nasalis interna” are consistent and reliable for safe drilling of the frontal sinus floor without the risk of jeopardizing the cribiform plate. The patients included in this clinical case series (n=20) were successfully treated with the medial approach after identifying the nasal branch of anterior ethmoidal artery located in the cribroethmoidal foramen and the spina nasalis interna at the floor of the frontal sinus. Neither intraoperative nor postoperative significant complications were reported in this study. Conclusions: Outside-in approach is a safe and easy robust approach based on reproducible fixed anatomic landmarks including the cribroethmoidal groove and the spina nasalis interna.

**Current opinion of surgical treatment of sinonasal inverted papilloma**

Reda H. Kamel, Ashraf Khaled, Ahmed F. Abdelfattah, Ayman Awad

The aim of the presentation is to highlight how surgery of inverted papilloma (IP) has developed during the past two years. Recent studies covering surgical treatment of inverted papilloma concentrated on the optimum surgical management of IP aiming at complete resection, least morbidity and best outcome, with special interest regarding the maxillary and frontal sinuses. In maxillary sinus inverted papilloma, to avoid empty nose and/or epiphora, recent articles exerted all attempts to preserve the integrity of both the inferior turbinate and nasolacrimal duct, yet offer best exposure of all maxillary sinus walls specially the anterior and inferior ones. These included the new modifications of the prelacrimal and Denker approaches and lateral nasal wall transposition. In frontal sinus inverted papilloma, to avoid an external approach and ensure postoperative patency of frontal sinus ostium, the periorbital suspension was introduced and orbital transposition approach was comprehensively utilized especially in far lateral located lesions and/or in supraorbital recess involvement. Associated malignancy is an important issue to identify as management plans significantly differ. Recurrence occurs early within the first 2 years but long-term follow-up is mandatory.

**Platelet Rich Plasma Application With Grafting In Postsurgical Sella Turcica Reconstruction**

Amany Abd El Badea
Zagazig University

Background: Reconstruction of the sellar defect remains controversial and is often subject to the surgeon’s detection of visible intraoperative leak. The aim our study was to assess the outcomes of platelet rich plasma application with grafting in post-surgical sella turcica reconstruction. Methods: A prospective case series study was conducted in Otorhinolaryngology Head and Neck surgery and Neurosurgery departments, Zagazig University Hospitals after Institutional Review Board (IRB) approval. The study included twenty-four adult patients with benign pituitary lesions showed evident CSF leakage at the end of surgery. Results: Thirteen patients (54.2%) were Grade I CSF leak with small weeping confirmed by Valsalva maneuver without a visible diaphragm defect and eleven patients (45.8%) Grade II with moderate leak with definite diaphragmatic defect. Reconstruction of sellar floor was done by gel foam packing of the sella, septal bone graft, surgical followed by PRP. Twenty-three patients (95.8%) showed no CSF leak along the duration of follow up in our study (18 months). Only one patient (4.2%) showed temporary postoperative CSF leak for 3 weeks associated with pneumocephalus, stopped after lumbar puncture with no need for further surgical intervention. Success rate was (95.8%). Conclusion: PRP application with grafting showed high success rate and decreased postsurgical CSF leak with results comparable to those of pedicled flaps with avoidance of nasal morbidity and complications caused by flaps. In addition to its easy preparation at time of surgery from the patient himself with no risk of infection.
Septal perforations how to prevent and how to manage
Essam A. Behairy
Menoufia University

Introduction: The nasal septum perforation is a major problem after nasal surgery. Although most patients are asymptomatic. However, there are several possible etiologies of this condition, making necessary a thorough investigation. Objective: A comprehensive management guide to nasal septal perforations. Successful surgical repair requires vascularized tissue flaps, interpositional tissue scaffolding, and tension-free closure. However, surgical techniques vary with the size of the defect, and there is no single universally effective procedure. Final Comments: The main causes are the traumatic / iatrogenic nasal drug use. Successful repair is challenging, even for the most experienced nasal surgeon. There is no single procedure or universally effective repair for closure of all septal perforations; however, successful repairs tend to have 3 basic common characteristics: use of vascularized tissue, placement of interpositional scaffolding, and tension-free closure.

Anosmia in COVID-19 :can we predict the severity of chest manifestation?
Ehsan Hendawy
Zagazig University

Introduction: Anosmia is one of the common symptoms of covid-19, the link between chest affection and anosmia was investigated by few studies.
Aim: To find an association between anosmia and severity of chest symptoms.
Methods: An analysis of patients admitted to isolation hospital of our University with confirmed polymerase chain reaction - positive testing for COVID-19, between March 2021 till September 2021. We called all patients who reported anosmia during the time of illness, and asked them about anosmia. We examine their chest CT. A statistical analysis was done.
Results: 140 patients completed the study. 65% were Female. 56.4% had complete anosmia. Anosmia was significantly associated with loss of taste. Smell returned in in 92.4% of anosmic patients. Duration of smell loss was about 2 weeks in 40.5%. The most common symptoms associated with anosmia were running nose, sore throat, fever and cough. Loss of smell was significantly associated with mild chest disease. 73.4% of anosmic patients had mild chest symptoms, 21.5% of them had moderate symptoms and 5.1% had severe chest symptoms.
Conclusion: The pattern of anosmia in covid-19 patients has some common similarities in general; the way it starts, the associated symptoms, the duration of smell return and the most important the severity of chest infection. As anosmia is significantly associated with mild chest affection, the presence of anosmia could be an independent predictor of good COVID-19 outcome as reflected by a less disease severity and less frequent ICU admission.

CSF leak: a diagnostic road map
Abdulaziz AlQahtani, MD Dr
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Abstract
Cerebrospinal fluid (CSF) rhinorrhea is caused by the presence of both a dural and an osseous defect in the skull base, resulting in a communication between the intracranial cavity and either the nasal or the middle ear cavity. Diagnosis of CSF rhinorrhea is usually made through a combination of a thorough clinical history and physical examinations followed by laboratory diagnostic procedures and imaging. A detailed history and physical examination, which includes a complete sinonasal evaluation, is necessary to rule out common conditions which may mimic CSF rhinorrhea. In a subset of patients with CSF rhinorrhea, clinical presentation is not straightforward, and missed or delayed diagnosis may occur. Fluid analysis is a non-invasive cost-effective method that is incorporated as the first step in the diagnostic algorithm of clinically suspicious CSF leaks. The β-trace protein and β2-transferrin assays have proven to be of high reliability and accuracy in detecting the presence of CSF. Localization of the site(s) of the leak is the most obvious main goal of the radiologic investigation, but there are several other critical issues that a proper imaging study can address. Two are the imaging techniques mainly indicated: computer tomography (CT) and magnetic resonance (MR).

Tips in Nasal Tip Surgery
Ahmed Walaa Abousheleib, MD PhD, Fellow
University of Toronto

Nasal tip refinement is one of the most challenging aspects of rhinoplasty surgery. Surgeons hoping to achieve refinement and consistent good results must have a good understanding of the nasal tip aesthetics and anatomy. A multitude of techniques exist for nasal tip refinement, but attaining consistent and long-lasting results is still challenging due to the complex interplay between tip anatomy and the surgical technique. The rhinoplasty Surgeon should have a good understanding of the various effects of each technique that will be used in his surgery on the nasal tip shape and parameters.
Keywords: Nasal Tip Refinement, Nasal Tip Aesthetics, Nasal Tip Anatomy, Nasal Tip Surgical Techniques.

Tips and tricks in management of nasal hump
Amr Gouda
Ain Shams University

A dorsal hump can detract from overall nasal and facial aesthetics, particularly because of the central prominence of the nose in relation to other facial features. In men, the dorsum should ideally be straight or slightly convex to preserve a strong and masculine dorsal profile. In women, the nasal dorsum should be relatively flat to preserve a soft and feminized appearance. In both sexes, the dorsum should project slightly above the nasal tip to maintain a harmonious relationship with the forehead. When a dorsal nasal prominence is considered, the contribution of the nasal hump to the overall aesthetic appearance of the nose should also be taken into account. When a prominent osseocartilaginous vault is assessed, the forehead and the nasofrontal angle, in particular, should also be considered. The root of the nose should begin at approximately the level of the supratarsal crease with a nasofrontal angle of 115-130° (ideal angle, 120°).
If the nasofrontal angle is too deep, accentuates whatever dorsal prominence is present and makes the hump appear larger. Lowering the hump to the level of the nasofrontal angle may result in excessive dorsal resection. Frequently, a combination of nasofrontal angle augmentation and conservative dorsal hump resection results in a smooth dorsal profile. The dorsal line (nasion-tip) should form a 30-40° nasofacial angle with the nasal plane (glabella-pogonion). Tip projection can also be assessed by various methods.
The variable skin thickness overlying the nasal dorsum should also be considered. The skin–soft tissue envelope tends to be thinnest overlying the rhinion, and straight-line resection of the dorsal prominence can result in a scooped-out appearance or a polly beak appearance in the supratip area. Overreduction of a man's nasal dorsum can feminize the patient's appearance and should be avoided.

Aesthetics of the nasal dorsum; tips & pearls
Mohamed Amer
Tanta University

Due to its central location, the nose plays a prominent role in facial aesthetics. As tastes have shifted and techniques have advanced, the accepted “ideal” appearance and proportions of the nose have evolved over time. By assessing the aesthetics of the nasaldorsum through the use of lines and angles, one can more precisely elucidate a goal for the patient's postoperative nasal shape, which should, in turn, guide the surgeon to execute specific operative maneuvers needed to achieve that contour. Constructed ideals, in the form of proportions, lines, and angles, should be used with caution, as there are many factors to consider in the aesthetic analysis of the nasaldorsum, including ethnic differences, and subjective and changing views of beauty.

Surgical treatment of allergic rhinitis
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Head of ENT Dept. TANTA UNIVERSITY

Treatment of allergic rhinitis is mainly medical. If medical treatment failed, we may resort to surgical interference. In patients with severe allergic rhinitis (AR) who are resistant to standard combinations of medical treatments. Patients with perennial allergic rhinitis who had failed to respond to combinations of medical therapy and suffered excess nasal secretion and hypersensitivity. AR patients are not tolerant to the adverse reactions caused by the drugs or their long-term application, and conventional non-surgical therapies failed to demonstrate ideal efficacies. Surgeries like vidian neurectomy and more recently posterosuperior nasal neurectomy will be discussed with other methods of surgical modalities to control allergy. Cutting of the posterior nasal nerve is an effective technique in the management of intractable nasal hyperreactivity in severely allergic patients after failure of all conservative alternatives.

Management of Frontal Sinus Fungal Osteomyelitis in the COVID-19 Era
Ali Tawfik
Mansoura University

Aim of the study: The aim of this study was to review different approaches and outcomes in the management of post-COVID-19 frontal sinus fungal osteomyelitis. Case series: The study included 19 patients with frontal sinus fungal osteomyelitis. The main line of treatment was surgical debridement (sequestrectomy). Approaches included combined external and endoscopic approaches (n = 15) and pure endoscopic approaches (n = 4) according to the extent and accessibility of the sequestrum. Post-operative healing was satisfactory in all patients. All patients returned to their normal daily activity within 4-6 weeks, without residual or recurrent frontal sinus infection, osteomyelitis or need for revision procedures. Conclusion: Frontal sinus fungal osteomyelitis occurs in setting of invasive fungal sinusitis. The incidence of FSO is increasing in the COVID-19 era, along with the sharp increase in the incidence of IFS. Combined surgical debridement and systemic antifungal treatment proved to be successful in the management of this potentially fatal condition.

Spontaneous CSF Leak: What have we learned?
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Introduction: At the present time, the reported incidence of spontaneous CSF rhinorrhea in different published series varies between 14-46% of all leaks as opposed to 3-5% in series published twenty years ago. This could reflect a true rise in the incidence of this condition. Over the years, with accumulated experience in managing this variant of CSF rhinorrhea, critical information has been deduced and implemented in the management plan of this disease in order to enhance the success rate. Aim of the work: to review the outcome of repair of spontaneous CSF rhinorrhea in a cohort of patients managed over a 26 years’ period. Critical analysis of recurrence is highlighted with discussion of its impact on the management plan for this disease. Patients and Methods: this study included a cohort of 43 patients with spontaneous CSF rhinorrhea managed surgically in the period from the year 1996 to the year 2022 and followed for variable periods (mean follow up period = 85 months). Results: initially, success in managing the CSF rhinorrhea was achieved in 41 patients out of 43 patients (overall success rate= 95%). However, and with extended follow up, delayed recurrence occurred in 6 patients (14%) several years after their initial repair. Interestingly, the recurrent leak in all 6 patients occurred at a site and/or side different from the original one. At the time of presentation of these patients with their recurrent CSF leak, their imaging study showed radiological evidence of elevated intracranial pressure. Conclusions: spontaneous CSF rhinorrhea should be considered as a variant of idiopathic intracranial hypertension and our strategy has been modified to include measures to control the idiopathic intracranial hypertension after the initial surgical repair of the defect site. Acetazolamide therapy and weight loss are important tools to be utilized in the long term management of these patients to achieve this control. Without implementing these measures there is indeed a potential for delayed recurrence.

Covid mucor More questions than answers
Anas Askoura
Ain Shams University

Background: The incidence of devastating opportunistic coinfections in patients with COVID-19 infection, their imaging features and their morbidity and mortality consequences need to be unraveled. Methods: This is a case series presenting the radiologic features and clinical presentation of acute invasive fungal rhino-orbital-cerebral
sinusitis (AIFS) in eight hospitalized patients with confirmed COVID-19 infection.

Results: Our patient cohort presented with symptoms of the invasive fungal disease within 12-35 days from their initial presentation with COVID-19 infection. The cross-sectional imaging features of AIFS associated with COVID-19 infection do not differ from those reported in the literature for AIFS associated with other risk factors, yet our patients had features of aggressive late-stage forms with high morbidity and mortality rate.

Conclusion: AIFS is a possible encounter in patients with COVID-19 patients and radiologists should be familiar with its imaging features.

Five hands technique in trans sphenoid pituitary surgery

Abdelrahman Younes
Cairo University

Endoscopic trans-sphenoidal approach is the best in dealing with multiple pituitary lesions. Angled endoscopes and also angled instruments give the surgeon the chance to handle different pituitary gland pathology.

The introduction of a modified technique by Paolo Castelnouvo, the binostriol four hands technique gives a new advantage over the previous mono-nostril two hands technique in relatively decreasing the time of the operation, giving more comfort to the surgeons, and enhancing the clarity of the field by continuous suction during dissection and so increasing the success rate of the operation. Our work is considered as an extension of Paolo Castelnouvo's work. In this study an extra hand is added to the previous four hands technique.

The fifth hand is a fixed non-traumatic round ended suction tube fixed by creating a house for the sucker after removal of the keel and drilling the upper part of the clivus in only seller type of the sphenoid bone. This technique adds a more value to the binostril four hands technique in decreasing relative operative time, enhancing clarity of the field by having two suction tubes one is fixed and the other is mobile during dissection, and also giving more comfort to the surgeons.

This modification has a great impact on the clarity of the surgical field helping the surgical team to achieve complete resection of pituitary adenomas.

Modified genioglossus advancement with radiofrequency tongue base reduction for retroglossal collapse in Obstructive sleep apnea patients

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ABSTRACT

Objective: To study the combined effect of modified genioglossus advancement (MGGA) and radiofrequency tongue base reduction (RFTBR) on OSA patients with retrolingual airway collapse.

Patients and methods: Twenty-six patients (26) with multilevel OSA under went modified genioglossus advancement with radiofrequency tongue base reduction and anterolateral advancement pharyngoplasty. All patients were assessed before and 6 months after surgery by history taking clinical examination, Epworth Sleepiness Scale evaluation fiberoptic examination during muller’s maneuver, drug-induced sleep endoscopy (DISE), panoramic X-ray, Cephalometry, and polysomnography.

Results: Postoperative mean ± SD Epworth Sleepiness Scale (ESS) significantly decreased from 18.86 ± 2.18 to 8.09 ± 1.81 (P-value was < 0.001 95% (CI) 9.80 to 11.53), postoperative mean ±SD AHI decreased from 53.39 ± 14.10 to 26.66 ± 5.44 (P-value was < 0.001 95% CI 22.37 to 32.81), postoperative mean ±SD LOS increased from 68.33 ± 9.12 to 86.0 ± 4.96 (P-value was < 0.001 95% (CI) 15.24 to 21.33). Based on cephalometric analysis postoperative mean ±SD PAS at mid retro-lingual point in mm increased from 6.43 ± 1.25 to 11.98 ± 1.69 (P-value was < 0.001 95% (CI) 4.78 to 6.32), also postoperative mean ±SD Distance between H-MP in mm decreased from 23.38 ± 1.14 to 15.17 ± 0.97 (P-value was 0.001 95% (CI) 7.66 to 8.76). The postoperative mean ±SD distance from hyoid to menton (H-me) in mm decreased from 39.47 ± 2.37 to 24.83 ± 2.43 (P-value was 0.01 95% (CI) 7.31 to 8.41), the mean ±SD distance of genioglossus muscle advancement in mm was 14.45 ± 1.12. With a success rate defined as AHI < 20 and a 50% reduction in AHI of the pre-operative value, the surgical success was 81%.

Conclusion: MGGA with RFTBR along with anterolateral advancement pharyngoplasty in a single session is well tolerated and safe surgery in the treatment of multilevel OSA patients. It is effective in reducing respiratory parameters and subjective symptoms of OSA.

Keywords: obstructive sleep apnea, modified genioglossus advancement, Radiofrequency tongue base reduction.

Anterolateral Advancement Pharyngoplasty versus Barbed Reposition Pharyngoplasty in Patients with Obstructive Sleep Apnea

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Abstract

Objective: To compare functional outcomes and complications of Anterolateral Advancement Pharyngoplasty (ALA) and Barbed Reposition Pharyngoplasty (BRP) in treatment of obstructive sleep apnea (OSA) patients with palatal and lateral pharyngeal wall collapse.

Setting. University hospitals.

Subjects and Method. Forty-six patients who underwent surgical treatment for OSA were included in this study. Patients were divided into two groups randomly (computerized), group 1 (23 cases) underwent anterolateral advancement pharyngoplasty (ALA Group) and group 2 (23 cases) underwent barbed relocation pharyngoplasty (BRP Group).

According to the following criteria: both sex, age between 18-65 years old, body mass index < 32 kg/m2, Friedman stage II or III, type I Fujita, nocturnal polysomnography study diagnostic for OSA, retropalatal and lateral pharyngeal collapse, diagnosis with flexible nasoendoscopy during a Muller’s maneuver based on a 5-point scale and drug induced
sleep endoscopy (DISE). Patients with retroglossal airway collapse were excluded from the study. The principle of those two techniques is to advance and fix the palatopharyngeus muscle with the superior pharyngeus constrictor muscle without transecting any of their fascicles to the pterygomandibular raphe.

Results. Pre- and postoperative polysomnography findings (Mean ± SD) showed significant statistical differences: apnea hypopnea index (AHI) decreased from 27.50 ± 11.56 to 11.22 ± 7.63 (P < 0.001) in group 1 and from 33.18 ± 10.94 to 12.38 ± 6.77 in Group 2 with no statistically significant difference between both groups (p value >0.05); lowest oxygen saturation level increased from 81.64 ± 6.41 to 90.21 ± 3.70 (P < 0.001) in group 1 and from 81.75 ± 6.42 to 88.60 ± 2.31 in Group 2 with no statistically significant difference between both groups (p value >0.05). Cephalometric pre- and postoperative findings showed significant statistical differences: retropalatal posterior airway space (PAS-I) increased from 9.84 ± 1.29 mm to 21.48 ± 2.6 mm (P < 0.001) in group 1 and increased from 10.26 ± 1.2 mm to 22.86 ± 2.62 mm (P < 0.001) in group 2 with no statistically significant difference between both groups (p value >0.05); palatal length decreased from 40.84 ± 5.45 mm to 30.52 ± 2.6 mm (P < 0.001) in group 1 and decreased from 38.67 ± 3.11 mm to 29.49 ± 2.14 mm (P < 0.001) in group 2 with no statistically significant difference between both groups (p value >0.05); and palatal thickness decreased from 13.04 ± 1.42 mm to 8.88 ± 1.08 mm (P < 0.001) in group 1 and decreased from 12.68 ± 2.07 mm to 8.93 ± 1.33 mm (P < 0.001) in group 2 with no statistically significant difference between both groups (p value >0.05). Pre- and postoperative volumetric computed tomography (CT) findings also showed significant statistical differences: retropalatal space volume increased from 1.9 ± 0.68 cm3 to 2.75 ± 0.7 cm3 (P < 0.001) in group 1 and increased from 1.96 ± 0.88 cm3 to 2.82 ± 0.83 cm3 (P < 0.001) in group 2 with no statistically significant difference between both groups (p value >0.05); and anteroposterior (AP) dimension of retropalatal space in axial CT cut increased from 10.68 ± 1.37 mm to 22.36 ± 2.78 mm (P < 0.001) in group 1 and increased from 10.42 ± 1.41 mm to 23.54 ± 2.73 mm (P < 0.001) in group 2 with no statistically significant difference between both groups (p value >0.05). Postoperative pain measurement according to visual analogue scale (VAS) were at the 1st week (4.54 ± 1.03), 2nd week (1.04 ± 1.29) and (0) after 1 month in Group 1 and were at the 1st week (5.13 ± 1.71), 2nd week (1.56 ± 1.37) and (0.17 ± 0.51) after 1 month postoperative in Group 2 with no statistically significant difference between findings of both groups (p value >0.05). Postoperative foreign body sensation in throat ranged from 4 to 21 days with mean and standard deviation 8.78 ± 5.96 in Group 1 and ranged from 11 to 60 days with mean and standard deviation 25.95 ± 17.40 in Group 2 with statistically significant difference between both groups (p <0.005). The mean time for patients to return to a normal diet was 8.17 ± 3.35 days in Group 1 and 15 ± 6.40 days in Group 2, with statistically significant difference between both groups (p <0.004). Two cases suffered from temporarily postoperative velopharyngeal insufficiency which was gradually improved within one month (8.69%) in group 2, while none in group 1 (0%). Two patients (8.69%) felt the extrusion of short piece of suture, without any additional problems in Group 2, while none (0%) in Group 1, with no statistically significant difference between both groups (p >0.05). The percentage of patients suffered from taste disturbance in postoperative period were 8.69 % in Group 1 and 13.04% in Group 2 during the first two weeks, while at 3rd week was 0% in both groups with no statistically significant difference (p >0.5). Operative time was 22.01 ± 3.06 minutes in group 1 and 23.78 ± 4.84 minutes in Group 2 with no statistically significant difference between both groups (p >0.05). Based on a threshold of a 50% reduction in AHI and AHI <20, surgical success was 86.95% in Group 1 compared to 82.6% in Group 2 with no significant statistical difference between both groups (p > 0.05).

Conclusion. Both Anterolateral advancement pharyngoplasty and Barbed reposition pharyngoplasty appears to be an effective surgical techniques with a high surgical success rate in the treatment of OSA patients with retropalatal and lateral pharyngeal wall collapse.

Keywords. Anterolateral advancement pharyngoplasty, Barbed reposition pharyngoplasty, obstructive sleep apnea, lateral pharyngeal wall, palatopharyngeus.

Barbed suture suspension of the tongue base

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Obstructive sleep apnea syndrome (OSAS) is a common clinical condition in which the throat narrows or collapses repeatedly during sleep, causing obstructive sleep apnea events..Some recent international studies suggest that the OSAS prevalence is 19% with different severity . Patients with untreated OSA have higher rates of health care use. OSA associated with Increased morbidity and mortality rates. Tongue Base collapse was founded in 50% of OSA patients those have moderate and severe apnea. Narrowing at this level are correlated with the apnea-hypopnea index (AHI) in the supine position especially in REM sleep.

Our vision in using the barbed suture in the tongue base suspension: We use the barbed suture in the tongue base suspension to get benefit from the barbs in the suture to prevent the shearing movement of the tongue tissue against the polyprolene suture classically use in the suspension that cause loosenes of the suture, and to cause fibrosis in the tongue tissue at the site of the barbs so it will cause stability of the suspension and prevent its laxity.

Patient selection:

- BMI of patients less than 35 kg/m2.
- Patients who have symptoms and signs of OSA.
- Moderate to severe OSAHS confirmed by formal polysomnography (defined as an AHI ≥15).
- Friedman tongue position III or IV.
- Documented failure/refusal of attempts of conservative treatment measures (not limited to continuous positive airflow pressure).
- The presence of retrolingual collapse confirmed preoperatively with flexible fiberoptic endoscope during Muller maneuver.
- Patients have macroglossia as defined by posterior airspace (PAS) of ≤10 mm.

The aim of surgery:

To improve the out-come and quality of life of obstructive sleep apnea patients after surgery.

Steps of surgery:

First of all we do sublabial incision. Then two small holes on the mandible to attach the barbed suture was created with a drill. The barbed suture was passed through the tongue base, to keep the vascular bundle safe, we passed the suture in the middle one third of the tongue base, by palpating the base of the tongue. The Barbed suture was then passed across the tongue base with a free cutting needle. The barbed suture passed to the sublabial incision area in the floor of the mouth muscles. The Barbed suture was tied with maximal force on the mandible hole. Then closure of the sublabial incision.
Endoscopic posterior septectomy: Technique & Indication
Mohannad Alqudah
Jordan

The nasopharynx is the upper portion of the pharynx located just posterior to the choanae and nasal cavities. It contains the Eustachian tube openings and adenoid. Obstruction of the choanal region by posterior inferior turbinate hypertrophy, adenoid tissue or tumor can cause chronic nasal obstruction in adult. Adult adenoid hypertrophy is a relatively common in our region and can be missed in the differential diagnosis of chronic bilateral nasal obstruction.

In this talk we present our experience in a novel, safe and simple technique to resect endoscopically the posterior-inferior part of the nasal septum to create a wide neo-nasopharynx which we believe can change the airway passage in the nasopharynx and so prevent disease recurrence. The steps of the procedure, indication, outcome as well as possible complications will be discussed.

Epinephrine in Fess: A new delivery method
Mohannad Alqudah
Jordan

Functional Endoscopic Sinus Surgery (FESS) is a common, effective and minimally invasive surgical procedure indicated mainly to treat medically resistant chronic rhinosinusitis with or without nasal polyposis. Endoscopic and laparoscopic procedures require dry surgical field to ensure accurate identification and visualization of structures and smooth surgical dissection progression. Intranasal bleeding during FESS can increase time of surgery and perioperative complications. Also it may affect healing process, increase adhesion formation and lengthening recovery period Different methods and maneuvers have been described in the literature to reduce intra-operative bleeding during sinus surgery.

Epinephrine is a nonselective agonist catecholamine that acts by binding to all adrenergic receptors, including the major subtypes α1, α2, β1, β2, and β3. Its cardiovascular effect is dose dependent. Epinephrine is one of the most commonly used topical vasoconstrictive agents. Systemic absorption of infiltrated adrenaline can give rise cardiovascular complications.

In this talk we present our experience in using epinephrine irrigation with normal saline during FESS. Method, indication, outcome as well as complications will be discussed. Specifically the effect of this method will be explained on visualization during surgery, total blood loss and surgeon satisfaction of the surgical field.

Endoscopic Approaches to the Maxilla
Siow Jin Keat
Singapore

The pathology of the lesion in the maxilla dictates the endoscopic approach. Pus can be drained by an antral washout with a cannula placed in the inferior meatus and irrigation carrying pus out through the sinus ostium. Fungal balls which are unattached to the maxilla mucosa can be aspirated through a middle meatal antrostomy with irrigation flushing out remnant material through this antrostomy. In performing a middle meatal antrostomy, it is important that the primary ostium is identified and united with a secondary ostium or any perforation made of the posterior fontanelle to prevent post-operative mucus recirculation. Maxillary mucocles can be marsupialised by a middle meatal antrostomy. Polypoidal mucosa can be removed with a microdebrider placed through an inferior antrostomy with endoscopic visualisation through a middle meatal antrostomy. For lesions by which maxilla mucosa has to be removed such as an inverted papilloma, a pre-ocular approach allows excellent access for the procedure. For postoperative monitoring, the lacrimal duct can be cut and the procedure extended into a medial maxillectomy with removal of the inferior turbinate and medial maxilla wall. Access to the anterior wall of the maxilla can be sometimes achieved by an extension of inferior meatal antrostomy anteriorly below the Valve of Hasner thus obviating the need for the lacrimal duct to be displaced or be cut.

Temporomandibular joint (TMJ)bony ankylosis; a challenging case
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Background: TMJ ankylosis is a disorder that leads to restriction of the mouth opening causing partial to complete immobility of the joint. Most commonly is traumatic, the Problems associated with TMJ ankylosis include: mastication, digestion, growth, speech, oral hygiene, malocclusion & facial disfigurement. Case presentation: In this case report, we presented the management of a 19 years old male with bilateral TMJ bony ankylosis secondary to mandibular trauma before 6 years. Clinical and imaging investigations were consistent with bilateral temporomandibular joint ankylosis (Type IV). Gap arthroplasty was performed with interposition of temporals muscle flap. No complications from surgery were detected, no recurrence, one year later, mouth opening is within normal range (3.8cm).

Conclusion: We describe here, a challenging bilateral temporomandibular joint ankylosis due to trauma with delayed surgical intervention. The aetiology, classifications, timing and choice of surgical techniques along with its considerations and complications are discussed. Although there is no consensus on the surgical treatment of TMJ ankylosis, early mobilisation, aggressive physiotherapy and close follow-up are advocated by the author & team for successful treatment.

Keywords: Temporomandibular joint bony ankylosis, traumatic, gap arthroplasty, temporals muscle flap.

A case report
How Rhinophyma Develops!
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Abstract
Rhinophyma, or bulbous nose as commonly named, is a skin disease that appears as a large, bulbous, and reddish nose

(1) The exact cause of this condition is unknown, most authors consider it to be a subtype of rosacea. Many risk factors are mentioned to account for the development of rhinophyma as alcoholism, Helicobacter pylori infection, xposure to ultraviolet radiation, or autoimmune disease.
Dilemma of recurrent sinonasal polyposis

Dr. Shady Elsayed Abdelaziz
ENT Consultant Mansoura International Hospital

Nasal polypsis is one of chronic airway diseases which affects the patient quality of life in different ways. Recurrences of these polyps occur in most of the cases. So many questions should be asked in our minds. What and how long medical treatment prescribed for these polyps, when do we take the decision for revision functional endoscopic sinus surgery, how to make a road map in revised nose, how can we decrease the rate of recurrence, for how long should we prescribe intranasal corticosteroid spray, what is the role of office based follow up, what is the role of monoclonal antibodies (dupilumab or omalizumab), what is the role of immunotherapy. These points should be searched well due to the importance of them in decreasing the nightmare of recurrence for the patient and the surgeon as well. All of these questions would be discussed and answered in this presentation.

Dr. Shady Elsayed Abdelaziz
ENT Consultant Mansoura International Hospital

Middle turbinate handling during FESS

Mohamed Fawzi Abdel Hafez
El Minshawy General Hospital

The aim of this technique is to obtain wide middle meatus post-operative which make the follow up in outpatient clinic easier and leave wide corridor which facilitate handling with any recurrent pathology without anesthesia.

Quick overview

- The middle turbinate is critical for several physiologic functions related to nasal airflow, humidification and conditioning of inspired air and sensory function including olfaction.
- Additionally, the nasomaxillary space serve to warm and humidify inspired air.
- Olfaction is another major physiologic function influenced by the middle turbinate.

- Olfactory epithelium, consisting of pseudostratified columnar neuroepithelium, is typically located in the cleft between the septum, middle and superior turbinates.

So...

Unnecessary sacrifice of this tissue is best avoided.

Steps

First we make conchoplasty to the middle turbinate through removal of its lateral half by shevar which widen the middle meatus intraoperative and not affect middle turbinate stability as we leave axilla intact in most of patients.

Second step is to do bulgeralization to the middle turbinate by making raw area in its medial surface by shaver, then doing the same thing in the septum.

Then we fix them all by one or two stitches from one side to otherside to help healing in this position till healing by fibrosis.

Palatal procedures in Snoring & OSA

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Palatal procedures are indicated in the majority of cases with snoring & OSA. The soft palate and the uvula are responsible for snoring in 80% of cases. Also retropalatal obstruction in OSAS patients is present in at least 75% of cases. However these palatal procedures are encountered with many problems including: high variability of oropharyngeal anatomical pictures, unpredictable functional results, unpleasant long-term complications and limited stability of the time of results. So, careful choice of the type of surgical technique to be used in each case is very important.

In this presentation minimal and more invasive palatal procedures are described.

Minimal invasive palatal surgeries in Snoring & OSA are:
- Uvulectomy
- Palatal stiffening

Insertion of palatal implants,

Laser assisted uvulopalatoplasty (LAUP)
Injection of a sclerosing agent (snoreplasty),

Coblation Assisted Upper-airway Procedures (CAUP)
- Anterior Palatoplasty
- Barbed relocation pharyngoplasty
- Palatopharyngeal suspension sutures

Invasive palatal surgeries in Snoring & OSA are:
- UPPP & its modifications
- Cautery-assisted palatal stiffening operation (CAPSO)
- Lateral Pharyngoplasty & ESP
- Transpalatal advancement pharyngoplasty

Selection criteria are described to select the best palatal procedure for the proper patient to get the best result with the least morbidity and long lasting effect.

Adapted Egyptian best practice guidelines of epistaxis

Diaa Elhennawi
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Abstract

Patient with nosebleed we should assess the airway and hemodynamic state. If patient is critical he should be transferred to the hospital.
If there is active bleeding we do nasal compression for at least 5 minutes. If the site of bleeding is evident we do nasal cautery. If bleeding in not controlled we do nasal packing either anterior, posterior or both. If Epistaxis is not controlled evaluate patient candy for ligation of the sphenopalatine, or, Ethmoidal arteries. Embolization is another option. Any risk factor should be monitored bleeding tendency, anticoagulant drugs or drugs.

Endoscopic excision of nasopharyngeal angiofibroma

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Introduction: Angiofibroma was thought to be a benign, locally invasive, hypervascularised tumour without a true capsule. Yet, theories suggest that it is a vascular malformation or hamartoma related to 1st branchial arch artery. It affects almost exclusively teenage males. Histologic origin of JNA involves vascular endothelial cells or fibroblasts with tumor composed of dense stroma with variable number of stromal cells and vascular component with differently sized and shaped vessels.

Tumor spread: It originates from the submucosal tissue of the superior margin of the sphenopalatine foramen and can extend to nose and paranasal sinuses especially sphenoid sinus, nasopharynx, basi-phenoid, pterygopalatine fossa, infratemporal fossa, parapharyngeal space, eye, cheek and intracranial fossa (anterior or middle cranial fossa)

Clinical picture: It presents in adolescent males with a variety of symptoms depending on the degree of expansion of the tumour (nasal obstruction, recurrent epistaxis, proptosis and cheek swelling). Nasal endoscopy shows large, lobulated mass behind the middle turbinate filling the choana with a smooth surface and clear signs of hypervascularization.

Classification: First reported classification was by Sessions et al in 1981 with many other classifications present most accepted is that of university of Pennsylvania Medical center in 2010.

Imaging: Imaging clearly establishes the extent of tumor, its pattern of spread and consequently surgical planning. CT scan of paranasal sinuses shows Soft tissue density slightly heterogeneous mass centred on sphenopalatine foramen with extension according to tumor growth, with bowing of the posterior wall of the maxillary sinus. The tumor shows intense enhancement with IV contrast

MRI shows Isointense to hyperintense on T1- and T2-weighted scans with multiple flow voids. The tumor Enhance intensely following intravenous gadolinium especially early arterial enhancement

Tumor devascularization: Is important especially in large tumors and can be done by preoperative embolization using angiographic superselective embolization or Intra-tumoral embolization. In areas where these techniques is not feasible external carotid ligation in neck above origin of facial artery may be an option.

Treatment: Complete surgical excision is the main line of treatment and may be done by external approaches as trans-palatal, LeFort I osteotomy, Midface degloving, Lateral rhinotomy or Trans-facial approaches. Endoscopic endonasal approach has emerged as a preferred option due to enhanced visualization, ability to look around the corners and avoiding external incisions and bone removal which decrease operative time, bleeding and hospital stay as well as better cosmesis.

Combined approaches may be indicated in extensive tumors as Infratemporal approaches, Craniofacial approaches or Combined endoscopic and external approaches.

Radiotherapy is only indicated for residual irresectable tumor. Also Anti-Hormonal therapy can be used in combination with surgery or radiotherapy.

Tips in endoscopic surgery

- Hypotensive anesthesia and warm saline irrigation
- Early control of blood supply of tumor
- Use of monopolar and bipolar cautery
- Posterior septectomy and use of 4 hand technique
- Sub-periosteal dissection and opening of periostium of pterygopalatine fossa with Controlled traction
- Sharp dissection at basi-phenoid and nasopharynx and Drilling of vidian canal and Pterygoid base, basi-phenoid
- Packing is used to control venous bleeding from pterygoid plexus

Acute Invasive Fungal Rhinosinusitis

Dr M. Mohamed, Prof., El Sharnouby, M.D
Ain-Shams University

Introduction: Fungal spores are abundant in the atmosphere and are inhaled to form part of the normal sinonasal flora or become destroyed by normal functioning immunological cascades. However, they can cause inflammation, if the environment is suitable for this, as in case of prolonged use of antibiotics, poor ventilation, dark and moist environments and Immunocompromised state. These conditions cause immunological pathways disruption, making fungal infections more likely.

Pathophysiology: Acute invasive fungal rhinosinusitis progresses rapidly (less than four weeks) and after invading sino-nasal mucosa fungi invade the neural and vascular structures. This, in turn, causes thrombosis with local and distant ischemia leading to necrosis. This facilitates spread outside the infected sinus cavity into surrounding tissues and bone.

Population affected: Immunocompromised patients as (1) Diabetics especially uncontrolled with diabetic ketoacidosis. The organism is often Mucor species due to their affinity for acidic environments with high glucose concentrations. (2) Patients with low absolute neutrophil counts as patients with hematosic malignancies, solid organ transplants, bone marrow transplantation, HIV/AIDS and those receiving chemotheray. These patients often have Aspergillus species isolated. (3) Iron overloaded or renal failure patients receiving deferoxamine for iron chelation. Organism is usually Rhizopus as it binds to deferoxamine which supplies the fungus with extra iron which aids its growth.

Clinical picture: An immunocompromised patient with symptoms and signs of rhinosinusitis in early cases and ophthalmoplegia, loss of vision, facial swelling, blackish colouration of turbinates, septum and palate and facial palsy in advanced cases

Investigations include: T and MRI of paranasal sinuses are nonspecific with findings similar to sinusitis in early cases with septal perforation, invasion of orbit and brain in late cases. In MRI gangrous tissues appear as void signals.

Biopsy, mucosa appears pale and necrotic due to vascular thrombosis from fungal invasion. Histopathologically, the mucosa shows infarcition vascular thrombosis and usually scant inflammatory cells. Angioinvasion of fungal forms resulting in luminal thrombosis. Silver and PAS stains are often useful at highlighting the organisms particularly in vessel walls and vascular space lumens. Aspergillus species are Septate hyphae branching at acute angles and Zygomycoma order (Mucor, Rhizopus) are Broad nonseptate hyphae branching at 90 degrees. Fungal culture are useful but results are delayed.

Relation with covid 19: Marked Increased in incidence of acute invasive fungal rhinosinusitis in covid and post covid patients was noticed and may be due to Virus infection itself causes alteration of immune system, low leucocytic count, iron overload and hypercoagulability. Drugs used in treatment of covid 19 infection (excessive use antibiotics, drugs that alter immune reaction as IL-6 inhibitor and steroids) or drug induced diabetes with excessive use of steroids.
Treatment: Multidisciplinary approach is a key to successful management which include medical physician, otorhinolaryngologist, maxillofacial, neurosurgeon and ophthalmologist and histopathologist.

Lines of treatment include (a) Control general condition, (b) Surgical debridement of necrotic tissue until healthy, bleeding tissue is encountered, tissues are taken as biopsy for histopathology and fungal culture. And (c) Systemic and local antifungal treatment. Systemic antifungal depends on type of fungus and should start empirically before results of histopathology and biopsy when suspected, with Amphotericin B the drug of choice.

In case of Aspergillus infection, Voriconazole is the first-line therapy with Isavuconazole and liposomal amphotericin B considered alternative agents. Also Posaconazole can be used in cases refractory or intolerant of first-line therapy.

In case of Zygomycota order (Mucorales) infection Liposomal amphotericin B is the initial drug of choice with Posaconazole or Isavuconazole used for patients who are intolerant or refractory to liposomal amphotericin, or for continuing treatment after initial control with amphotericin.

Endoscopic Management of true Hemangiopericytoma arising from the nasal septum; case study and literature review

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Fayoum University

Introduction: Hemangiopericytomas are vascular neoplasms that are derived from Zimmerman’s capillary pericytes. Of the paranasal sinuses, ethmoid and sphenoid sinuses are most commonly involved but in our case it arising only from the nasal septum.

Case Report: We report an uncommon case of 42 years old female who came to our university outpatient clinic suffering from unilateral right epistaxis.

The condition started with unilateral nasal bleeding and block. On examination, there was a fleshy polypoidal mass seen filling the entire right nasal cavity reaching the posterior choana.

Materials and methods: A CT scan of the paranasal sinuses shows a soft-tissue mass with strong enhancement after contrast administration. MRI showed a solid isointense mass with strong contrast intake on T1-weighted imaging and varies from isointense to low intense on T2-weighted imaging. MRA of the mass show a vascular mass supplied by internal maxillary artery.

Biopsy and histopathology demonstrated tightly packed proliferated spindle cells surrounded by an intact reticulin sheaths with a stag horn pattern arrangement.

Result: Endoscopic resection of the tumor without preoperative embolization with safety margin from the nasal septal perichondrium leaving the avascular nasal cartilage and follow up for six months with no recurrence.

Conclusion: The results of this study showed that drilling of the atretic plate using the piezoelectric device with preservation of muco-periosteal flap and observed granulation tissue formation and restenosis in the postoperative period.

Abstract

Background: Restenosis and reclosure of the choana are common complications after repair of choanal atresia. Modifications to bone drilling with no injury to surrounding nasal soft tissues may reduce postoperative reclosure.

Objectives: We performed drilling of the atretic plate using the piezoelectric device with preservation of muco-periosteal flap and observed granulation tissue formation and restenosis in the postoperative period.

Methods: 20 patients with unilateral bony or bony membranous choanal atresia underwent removal of the atretic plate using the piezoelectric device with preservation of the muco-periosteal flap to cover the borders of the neo-choana. All the patients were followed up in a period ranging from 6 months to 2 years duration. Results: 15 patients out of 20 showed patent choana postoperatively and throughout the follow up period with success rate 75%. Only 5 patients developed reclosure and restenosis of choana with failure rate 15%.

Conclusion: The results of this study showed that drilling of the atretic plate using the piezoelectric device was effective in preservation of the muco-periosteal flap, thus reducing the postoperative granulation tissue formation and reclosure of choana.

Keywords: Choanal atresia, Transnasal endoscopic, piezoelectricity, Reclosure

Transnasal Endoscopic Piezoelectric Surgery for Repair of Choanal Atresia

Ashraf Mahmoud Khaled, Ramez Sabry Fahim, Mohammed Abd El Azeem Fawaz, Maie Hossam El- Den, Rabie Sayed Youssef

Antrochoanal polyp: practice to prevent recurrence

Mohamed hussein Abdelazim
Associate professor of otorhinolaryngology, Al azhar faculty dametta

Introduction: Antrochoanal polyp is a benign unilateral polyp, originating from the maxillary sinus and expanding through the accessory

Trans-orbital Endoscopic Approach To The Skull-base

Ahmed Aly Ibrahim, Prof
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Endoscopic-assisted surgical approaches to the orbit are mainly performed via transnasal routes while non-transnasal endoscopic approaches inside and around the orbit are still rarely adopted in practice. In other words, nowadays the orbit should not only be
considered the site of a pathologic finding, but also seen as a corridor for access to deeper areas. Orbital and trans-orbital surgery requires great precision and care to safe the structural integrity of the vital intraorbital content and functions as well as to preserve the aesthetics of the face. It should be a case-to-case basis providing the most direct access to the lesion while minimizing any trauma to adjacent structures. The anatomy of the orbit and orbital apex is complex owing to the close relation of the carotid arteries, optic nerves, pituitary gland and cavernous sinus. The study group includes: Orbital decompression 25 cases (traumatic 10, Graves 6, orbital pseudo-tumor 9) Inflammatory 250 cases (SPA, orbital abscess, orbital cellulitis, orbital apex and superior orbital fissure syndrome, ) Neoplastic 21 cases (Meningioma 4, front-ethmoid-orbital osteoma 8, fibrous dysplasia ON decompression 2, ossifying fibroma 2, aneurysmal bone cyst 1, biopsy 3 and osteosarcoma 1). Congenital 1 Dermoid cyst

Conclusions: Management orbital lesions needs a multidisciplinary team work. Planning of the surgical approach depends on the site and size of the lesion. Endoscopic intraorbital surgery is relatively new because of the paucity of orbital tumors. The field is still expanding as surgeons are gaining more experience.

The state of art in management of inverted papilloma

Ahmed Elfarouk
Cairo University

Inverted papilloma is the most common sinonasal tumor. It is well known for being locally aggressive, multicentric, associated malignancy and high rate of recurrence. Patients usually present by unilateral nasal obstruction and discharge and occasionally by epistaxis or headache. Although diagnosis of inverted papilloma is suggested by nasal endoscopy and radiologic findings of computed tomography (CT) and MRI studies, it is finalized by the histopathology. Complete surgical resection is mandatory to ensure complete excision and avoid recurrence. This is usually achieved via a transnasal endoscopic approach and sometimes via open or combined approaches. Each has its advantages and disadvantages. The approach and extent of surgery are designed mainly on the extent of disease and/or the origin of the lesion. Associated malignancy requires further management.

Classifications have been postulated to help guide surgeons for the best approach and optimum surgical resection and anticipate recurrence. They depend on the location and extent of the inverted papilloma. Recurrence is related mainly to incomplete resection. Intracranial extensions are usually extradural and intraorbital extensions are extraperiosteal. The whole surgical biopsy should be examined accurately to rule out the possibility of associated malignancy.

Historical Background And Evolution Of Hyoid Surgery As A Part Of Multilevel Surgery In Obstructive Sleep Apnea

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Zagazig University

Aim of the work: This study was designed to assess the outcomes of hyoid悬垂成形术 as a part of multilevel surgery of obstructive sleep apnea.

Methods: A prospective case series study was conducted after Zagazig University Institutional Review Board (IRB) approval. The study included thirty-two adult patients who had snoring and OSA symptoms with CPAP refusal, failure or non-compliance, body mass index (BMI) ≤ 35, with hypopharyngeal and retropalatal and/or nasal obstruction.

Suspension pharyngoplasty and thyrohyoidopectomy were performed under general anesthesia after full ENT examination, grading of the tonsillar size and palatal position, Polysomnography, awake nasendoscopy and drug induced sleep endoscopy (DISE).

Results: The hypopharyngeal collapse was grade 3 in 18 cases (56.25%) and grade 2 in 14 cases (43.75%) which was improved to grade 0 in 5 cases (16.625%), grade 1 in 23 cases (71.875%) and grade 2 in 4 cases (12.5%). All cases of hypopharyngeal collapse were of transverse pattern. The number of recovered patients (<10 events/h) was 6, patients with 10-20 events/h were 16 (cardiovascular prevention) with a success rate of 68.75%. The improved patients (post-operative AHI > 20 events/h but inferior to preoperative AHI) were 10. There were no patients with unchanged or worsened AHI postoperatively.

Conclusions: There is no significant change in the postoperative posterior airway space which supports the idea that hyoid suspension does not widen the airway but it is more a prevention of collapse.

Endoscopic trans-sphenoidal surgery: Predictors of disease control

Baliegh Hamdy
Minia University

Background: EETSS for pituitary lesions has evolved since its incipient description. However tumor size and extrasellar extensions of pituitary adenomas remain a challenge for disease control.

Aim: This study was conducted to evaluate the predictors of the outcome postoperatively in a series of pituitary adenomas.

Materials and methods: 65 pituitary adenomas presenting over 36 months period subjected to excision by endoscopic transsphenoidal approach. Disease control (DC) based on the extent of tumor resection and endocrinological remission was evaluated according to the radiological and hormonal consensus criteria.

Results: Of 65 patients operated, 24 were endocrinally nonfunctioning and 41 were functioning adenomas. Follow up duration ranged from 3-33 months. The overall DC was 67.7% as measured using total tumor resection and endocurial cure. Cavernous sinus invasion, supra-sellar extension and revision surgery negatively influenced DC of pituitary adenomas. Postoperative complications related to surgical resection of adenomas were seen in 12 cases (18%) mainly, CSF leak.

Conclusions: This study reports standards for DC in a short follow up series of purely endoscopic pituitary surgeries and identifies pituitary lesions associated with preoperative predictors that can influence postoperative outcome. These results authenticate the efficacy and safety of endoscopic endonasal transsphenoidal surgery in the treatment of pituitary adenomas, providing favorable DC for both functioning and nonfunctioning pituitary adenomas.

Sphenoid CSF Rhinorrhea

Yasser Khafagy
Mansoura University

Sphenoid sinus is not uncommon site for CSF rhinorrhea. The sphenoid sinus may be the easiest sinus to reach. However, it may be the sinus who...
have the most dangerous relations such as the optic nerve and internal carotid artery. The most common etiology of CSF rhinorrhea from the sphenoid sinus is iatrogenic after pituitary surgery. The second cause is spontaneous leaks from the lateral recesses of the sphenoid sinus. We present outcome of the anatomical details and variations of sphenoid sinus. In our presentation we presented our experience with CSF rhinorrhea from different sites in the sphenoid sinus. We present methods of diagnosis, and repair. Techniques and pitfalls of surgery in the sphenoid sinus is described. It is essential to acknowledge the importance of anatomical landmarks and variations of the sphenoid sinus. Factors for successful repair of sphenoid CSF Rhinorrhea is outlined.

**Decision making of periorbital cellulitis.**

Moamen Ibrahim, KFS-GH

*Rhino Egypt 2022*

Orbital complications of sinusitis may occur due to extension of infection from the PNS to the orbit or even extended intracranially. It may be a serious condition that may lead to temporarily or permanent loss of vision and even may cause life threatening of the patient. CT with contrast and MRI with gadolinium are the investigations of choice in such cases. Early diagnosis, early management and Close follow up are the key answers of such cases. Hospital admission, aggressive parenteral antibiotics if no response for 48 hours or progression of disease for more than 24 hours surgical intervention is advise.

**Island Pedicle Flap: A versatile and dependable technique for covering small to medium sized facial defects.**

Abd ElRahman Ezzat Ibrahim

*UK*

Background: Facial skin defects following the excision of cutaneous neoplasia may present a reconstruction challenge. The island pedicle flap offers a versatile and dependable tool for reconstruction of a variety of facial defects. The aim was to evaluate our experience with the utility of the island pedicle flap in reconstruction of facial skin defects.

Methods: A retrospective assessment on 48 patients was performed. The data was collected between November 2018 and June 2020. The reconstructions were performed in consideration of the relaxed skin tension lines and facial aesthetic unit concept.

Results: All defects were successfully covered with island pedicle flaps. The defect sizes varied from 0.2 cm² to 9.5 cm². The outcome for the safety margins were as follows: 4 cases with 0.3 cm margin, 22 cases with 0.4 cm margin, 16 cases with 0.5 cm margin and 6 cases with 0.6 cm margin. Excision margins per pathology were compared to the BAD criteria; with 40 cases meeting the BAD criteria and 8 cases not.

For this study, we focussed on two FACE-Q Skin Cancer Module scales. ‘Satisfaction with Facial Appearance’ had a highest score on the scale of 93% satisfaction and 19% of patients scored 71-82% on the scale. Regarding ‘Appraisal of Scar’, 79% of patients rated their outcome 82-100% on the scale.

Conclusion: Considering the simplicity and safety of island pedicle flaps, this flap has been proven a reliable and a valuable tool. Keywords: Island Flap, skin cancer, facial defects

**Using Anterior Ethmoid Artery Flap With or Without Cartilage Graft for Nasal Septal Perforation Repair**

Ahmed Yehia, AinShams

*UK*

Introduction: The septal perforation is one the challenging condition that face the otoaryngologist. The aim of our work was to evaluate this endoscopic repair of the septal perforation using the prescribed flap, from different aspects.

Method: All of patients were adult with septal perforation due to trauma (operative and self-induced) for more than one year. The main symptoms were crusting (100%), bleeding (38.85), whistling (16.6%), anosmia (16.6) and feeling nasal obstruction (11%). The Mean perforation size 13.6 mm, ranged between the largest one, which was 28mm, and the smallest was 4mm. Number for years with the perforation (ranged between 2 to 16 years) with a mean of 4.8 years and Mode of 2years.

Result: There were no intraoperative complication but the postoperative one was included pain, the pain range was between the 2 to 8 from maximum 10, (Mean score was five and Mode was four, appeared in six patients), which treated with regular painkillers. In addition, the one patient (5%) with residual small perforation (2mm only). Those entire patients were happy to fill post-operative patient satisfaction questioner (Qol.Q) after 3 months with maximum of 25 points. The Mean 21.8 points and the was Mode 25 points, appeared 4 times, the points was ranged between Smallest 15 points and the Largest 25 points.

Conclusion: The anterior ethmoid artery nasal flap with or without cartilage graft has been proven a reliable and a valuable tool that, with proper planning, can provide excellent results with minimal morbidity for nasal septal perforation repair.

Key words: Septal perforation repair, Vascular flaps

**Combined Endo-microscopic approaches (CEMA) to the skull base**

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Hungary

For the best outcome during the skull base surgery we have to have wide view to the operating field and quite place for the instruments. We have to radical resect the tumor but we also need to have a minimal invasive methods for preserving the physiological function and the aesthetic as well.

The ENT- and Neurosurgeons usually combine the own philosophies and techniques in a Skull Base Team (SBT). To the anterior skull base the traditional method is the transnasal or transfacial microscopic but the most preferable method is the transnasal endoscopic approaches. But for widening the indications the new multiportal, transmaxillary or transorbitaly are widely used.

In our SBT have been introducing endoscopic surgical techniques step by step since 2007, but we have also retained microscopic and modified external approaches, depending on the indication.

Most commonly used in combination with endo / microscopic transnasal pituitary (CEMP), endoscopic transnasal maxilloethmoidal and parapharyngeal, and mid- facial deloving (MFD) with modified transnasal endoscopic techniques.

The most special approach is the simultan multiportal approach (SMA): transnasal endoscopic and transcranial (supraciliary-fronto-lateral (SCFL)). With those combinations we could optimised the advantages the endoscope and microscope, maximize the visualisation, reducing the time and optimized the outcomes.
Role of Distraction Osteogenesis in management of Syndromic Mandibular Deformity: a case series
Mohamed Elsayed Hassan

INTRODUCTION The treatment strategies of various facial deformities are multiple and diverse, among which the role of distraction osteogenesis is highlighted and examined. Different syndromic patients of various clinical characteristics affecting the bone and the related soft tissues as well as the teeth occlusion are included in this case series.

AIM OF THE STUDY: To evaluate and analyze multiple cases of various syndromic mandibular deformities corrected by distraction osteogenesis.

STUDY DESIGN: 66 cases presented to our department with syndromic mandibular deformities were divided into 3 groups according to their presented deformity:

Group I: Unilateral syndromic mandibular deformity without Occlusal Cant.
Group II: Unilateral syndromic mandibular deformity with Occlusal Cant.
Group III: Bilateral syndromic mandibular deformity. Preoperative, intraoperative and postoperative procedures were documented, clinical photographs and radiographic examination were performed. All the patients signed an informed consent and a release form to allow publication.

DISCUSSION: The article includes a detailed discussion of the choice of the distraction device as well as the challenges and complications faced by the surgeons. The use of rigid fixation vs intraosseous wiring and the methods of correcting the occlusal cant are presented. To achieve better aesthetic and functional results; additional surgical maneuvers other than distraction osteogenesis will be performed later and customized to each case accordingly. The article adds to the increased attention to Distraction Osteogenesis in the treatment of congenital and acquired deformities.

KEYWORDS Distraction osteogenesis, Syndromic mandibular deformity, Hemifacial Microsomnia, Treacher Collins Syndrome, Occlusal Cant.

Imaging of Paranasal Sinuses
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Knowledge of paranasal sinus anatomy, development and variants is critical in interpreting sinus C.T. exams. Characterization of inflammatory disease, especially acute versus chronic, requires clinical correlation. C.T. is useful to evaluate for chronic or complicated sinus disease, as well as preoperative planning. Inclusion of CLOSE mnemonic (cribriform plate, lamina papyracea, Onodi cell, Sphenoid sinus, anterior ethmoid artery) search pattern on preoperative C.T. will help ENT surgeon avoid operative complications.

Local nasal flaps in skullbase reconstruction
Dr Nishit Shah
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In the early days of Skullbase surgery, we were limited to pituitary surgery from 1995-early 2000. The Pittsburgh group then expanded Skullbase surgery from trans-cribriform to trans-clival. Whilst tumour removal was successful, the big issue remained with reconstruction which was at abysmal rates of close 30% failure. In 2006, however, the group along with Hadad and Bassagestugey described the vascularised naso-septal pedicled flap. This revolutionised Skullbase surgery by ensuring good reconstruction, bringing down the failure rate to below 5% and ensuring the further progress of extended endoscopic Skullbase surgery.

Following that, other local flaps were described such as the reverse flap, the rescue flap, reserve flaps and the in 2011, the lateral nasal wall flap. In this talk, we take a look at the various flaps. In particular, we will talk about the intricacies of the Hadad flap. The technique of harvesting keeping the olfaction intact, and yet having as broad and wide a flap as required is discussed. Also, the finer points in flap deployment and placement are emphasised.

Ct scan PNS: Analysing for anatomy
Dr Nishit Shah
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When Ct scans were first employed for FESS 30 years ago, the sections were 5mm wide reformatted from axial cuts and essentially used to see pathology. It took a few years for thinner slices to be made available and for rhinologists to be able to study the scans for anatomy as well. Today, scans have remarkable clarity in all 3 planes, sub mm cuts and dicom images on CD (or pen drives) that allows for complete 3D visualisation of anatomy. This allows for detailed surgical planning and hence the chance to restrict complications, whilst ensuring complete disease clearance. This talk emphasizes the different aspects of reading CT scans for anatomy, helps the listener understand the process and improving surgical results.

Effect of changes in nasal tip projection and rotation on the alar flare
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Fayoum University

Abstract
Background: Alar flaring occurs when the horizontal flare width extends beyond 1-2 mm from the intercanthal distance on each side. There are main factors affecting the alar flaring: nasal tip projection, nasal tip rotation and basal height. In this study, our aim was to assess the effect of changes in nasal tip projection and rotation on the alar flaring introperatively. Patients and methods: Our study is a comparative study including 40 patients suffering from alar flaring and they were divided into two homogenous groups; Group A: Twenty patients underwent reduction rhinoplasty with increasing the basal height and Group B: Twenty patients underwent rhinoplasty with decreasing the basal height. Objective assessment was achieved using vernier caliper on living subjects to detect specific measurements (intercanthal distance, horizontal flare width, vertical flare width, nasal base width, basal height). The nasal tip projection and rotation were assessed using standard photographs and we compared the results preoperatively and intraoperatively. Results: Nasal tip projection was decreased significantly in intra and postoperative measurements while nasal tip rotation statistically increased in comparison to the preoperative status in both groups. Despite similar intraoperative changes in tip rotation and projection in both groups, the horizontal flare and the nasal base width were decreased significantly in Group A and
increased significantly in Group B. This could be attributed to the increased basal height in Group A in comparison to Group B. Increase in the basal height in group A could be due to the frequent use of columellar struts and tip defining sutures to support the tip and to correct any basal asymmetry. Conclusion: Intraoperative changes in the horizontal flare and the nasal base width must be taken into consideration to either increase or decrease the amount of excised skin. Key words: Rhinoplasty, Alar flaring, Wide nasal base, Factors affecting the alar flaring.

Spontaneous CSF rhinorrhea in the infrasellar and clival region: rare site with high risk of meningitis

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Objective: Spontaneous and idiopathic CSF leak in the infrasellar and clival region is a rare condition. Although rarely developing spontaneously in this site, cerebrospinal fluid (CSF) rhinorrhea may have devastating consequences such as meningitis

Methods: 45 years old female presented to us after discharge from the ICU where she was admitted for management of meningitis. The patient had history of left sided watery nasal rhinorrhea for the past 4 years. She developed meningitis 6 months ago and the course of the illness was severe and she need ICU admission for 1 week. CT nasal and PNS showed opacified right sphenoid sinus. Sagittal CT revealed a postellar sphenoid configuration and suspected a defect in the infrasellar region. Surgical closure of the defect site was attempted. A small meningeocele was detected at the infrasellar region and was cauterized at first. Multilayer closure of the defect site was performed (detailed reconstruction in the video).

Conclusion: In cases of sphenoida sinus CSF rhinorrhea, the majority of defects are located at the junction of the anterior portion of the lateral sphenoid sinus wall and the floor of the middle fossa (Sternberg canal/crunopharyngeal canal). Spontaneous CSF leak due to an infrasellar defect is a rare entity, with fewer than 40 cases reported in the English literature. An idiopathic infrasellar defect causing a spontaneous CSF leak is an extremely rare but potentially life-threatening condition, warranting timely endoscopic, endonasal repair.