1-

**Allergic fungal rhinosinusitis: detection of fungal DNA in sinus aspirate using polymerase chain reaction**

Abstract

Objective: This study investigated allergic fungal rhinosinusitis cases, and aimed to compare the detection of fungi in sinus aspirate by culture and by polymerase chain reaction assay, and to relate the presence of fungi in the nasal sinuses to the type of fungal allergen causing disease.

Methods: Sixty-eight cases of allergic fungal rhinosinusitis underwent fungal culture and polymerase chain reaction assay for universal fungal, aspergillus and bipolaris DNA. Aspergillus-specific immunoglobulin E levels were measured in sinus aspirate, and total serum immunoglobulin E levels were calculated. A control group of 10 cases was included in the study.

Results: Of the 68 allergic fungal rhinosinusitis cases, only 42 (61.7 per cent) had positive fungal cultures; of the 10 controls, only three (30 per cent) had positive cultures. Species from the dematiaceous family were most commonly grown, being isolated in 30 cases (71.4 per cent). Bipolaris was the most commonly isolated species (18 cases) followed by curvularia (11 cases) and alternaria (one case).

Polymerase chain reaction assay detected fungal DNA in all the allergic fungal rhinosinusitis cases and also in four controls (40 per cent). Ten patients (of 68; 14.7 per cent) were positive for Aspergillus fumigatus specific immunoglobulin E. The mean concentration of this immunoglobulin was 11.32±4.12 IU/ml in patients and 0 IU/ml in controls, a statistically significant difference.

Conclusion: Detection of fungal DNA in nasal aspirate by polymerase chain reaction was superior to fungal cultures as a method of detecting fungal growth. In allergic fungal rhinosinusitis, fungal growth is not always accompanied by an allergic reaction.

2-

**Sinus aspirates in chronic rhinosinusitis: fungal colonization of paranasal sinuses, evaluation of ICAM-1 and IL-8 and studying of immunological effect of long-term macrolide therapy**

Purpose: In patients with chronic fungal sinusitis, concentrations of interleukin-8 (IL-8), immunoglobulin E (IgE), and soluble intercellular adhesion molecule-1 (sICAM-1) were compared in paranasal sinus aspirates and serum. Furthermore, immunological effects of macrolide treatment of our patients with chronic fungal rhinosinusitis were also studied.
Materials and Methods: In our cohort study, 108 patients with chronic rhinosinusitis undergoing sinus surgery were selected. Sinus aspirates were collected, and used for immunological assays and cultured for fungal studies. All patients were examined for the presence of characteristic allergic mucin of chronic allergic fungal rhinosinusitis, which was confirmed by measurement of total serum IgE.

Results: Our cases were classified into 3 groups: chronic rhinosinusitis with positive fungal culture and negative allergic mucin, chronic rhinosinusitis with positive fungal culture and positive allergic mucin and chronic rhinosinusitis without fungal growth. A control group was included.

We found 57.4% of the patient cultures positive for fungus and 36.4% of the control subjects. Aspergillus ssp. were the most prevalent followed by Bipolaris ssp., and Curvularia. IgE levels were increased in group II compared to group I, III and IV. ICAM-1 and IL-8 levels were increased in groups I, II and III compared to the control group. Erythromycin given in group II decreased the levels of IL-8 and ICAM-1.

Conclusion: Aspergillus species was the most common. These results confirm the role of ICAM-1 and IL-8 in all types of rhinosinusitis. Erythromycin modulated the immune status of the patients.

The Role of IL-8 in Different Types of Otitis Media and Bacteriological Correlation

Objective: To isolate and identify the different bacterial pathogens causing acute otitis media (AOM), Chronic suppurative otitis media (CSOM) and secretory otitis media (OME). Also to evaluate the role of IL-8 in different type of otitis media (OM).

Study design: Middle ear fluids were collected from 103 patients suffering from different types of OM. Patients separated into 3 groups: group I (AOM), group II (CSOM) and group III (OME). Middle ear fluid was collected and subjected to bacteriological study and assessment of IL-8.

Results: Positive cultures were detected in 68.7% in group I, 88.1% in group II while no bacterial growth was detected in group III. IL-8 was detected in the 3 groups with statistical significance between the 3 groups, it was evident between group I and III and between group II and III. There was significant correlation between the results of bacterial culture and the level of IL-8.

Conclusions: IL-8 plays a role in the development of chronicity of OM. It has intimate relation to the bacterial growth; it acts as a chemo-attractant to neutrophils into the middle ear fluid.
4- Endoscopic assisted probing for symptomatic congenital nasolacrimal duct obstruction after one year of age*

Purpose: When probing treatment for congenital nasolacrimal duct obstruction fails, it is often unclear whether it is due to technical difficulties or the severity of obstruction. Therefore our aim was to study the causes of probing failure and how to treat them.

Method: In a prospective study, 36 lacrimal systems of 26 children aged 12 months to 4 years with congenital nasolacrimal duct obstruction (CNLDO) were treated by probing. In all children probing was done under direct vision using nasal endoscopy. Different forms of CNLDO were treated and studied to determine the potential predictors for treatment failure.

Results: The overall success rate was 94.5%. Expected failure was attributed mainly to the construction of different forms of membranous penetration on probing. Surgical membranotomy at the area of Hasner’s valve under direct nasal endoscopic visualization is an essential step for proper management of CNLDO.

Conclusions: Nasolacrimal duct probing under direct nasal endoscopic visualization can be considered as the standard treatment of CNLDO as it minimizes intranasal trauma and leads to a better surgical outcome.

Key words: epiphora, tearing, probing, NLD, endoscopic assisted probing

5- Rubber Tube versus Silicone Tube at the Osteotomy Site in External Dacryocystorhinostomy

Background: In external dacryocystorhinostomy a large bony window is created in the lateral nasal wall and a mucosal anastomosis is created between the lacrimal sac and the nasal cavity. The success of the operation depends on the surgical anastomosis remains patent and converting to a wide enough epithelial-lined passage.

Objective: To compare the efficacy of using rubber versus silicone tubes at the osteotomy of Dacryocystorhinostomy

Design: Prospective, randomized, hospital-based study.

Subjects and Methods: 46 patients diagnosed with primary acquired nasolacrimal duct obstruction were assigned randomly to rubber, silicone or control group. The surgical procedures in the three
groups were the same except that in patients of rubber and silicone groups, rubber or silicone tubes were placed at osteotomy opening and removed after 3 months. Transnasal endoscopic findings were recorded at the completion of surgery and at 3 months, 6 months and 9 months after surgery for the 3 groups. A computer aided digitizer was used to calculate the surface area of the osteotomy site. 

Results: After removal of their tubes, 3 patients in the rubber group had recurrent epiphora (78.0% success), one patient in silicone group (92.86% success) and 4 patients in control group (77.8% success). The average final surface area of the osteotomy opening of patients with rubber group at the end of follow-up was (9.85 mm2) in the silicone group was (17.47 mm2), whereas in the control group was (8.56 mm2).

Conclusion: Silicone tube is better than rubber one in maintaining effective larger osteotomy after Dacryocystorhinostomy. This can improve the long-term success of the operation. KEYWORDS: External dacryocystorhinostomy; Stenting in dacryocystorhinostomy; Endoscopic assessment of ext. dacryocystorhinostomy; Silicone; Rubber stent

6- Insertion of middle-ear Silastic sheeting during tympanoplasty: hearing outcomes

Objective: To study the effect of Silastic® sheeting placed in the middle ear during tympanoplasty, including the effect on hearing.

Design: Retrospective study.

Background: Chronic inflammation of the middle ear is common. Surgical treatment sometimes results in middle-ear adhesions and hearing deterioration.

Materials and methods: We selected 106 patients with chronic otitis media, middle-ear adhesions and intact ossicles, based on intra-operative findings. These patients underwent single-stage tympanoplasty either with or without insertion of Silastic sheeting. Audiometry was undertaken pre-operatively and one and 12 months postoperatively.

Results: Patients who had undergone Silastic sheet insertion showed significantly better air conduction, bone conduction and air–bone gap averages one year post-operatively, compared with those who had not.

7- Nasal Endoscopic Assessment of Failure after External Dacryocystorhinostomy

Purpose: To study intranasal causes of failure of external dacryocystorhinostomy (DCR).
Design: A retrospective study of clinical data from transnasal endoscopic findings after failure of external DCR.

Methods: Assessment of 65 patients with failure after external dacryocystorhinostomy; subjectively by patient’s symptoms and saccharine test and objectively by patency on syringing, functional endoscopic dye test and endonasal endoscopic assessment.

Results: Endoscopic findings revealed: 20 cases intranasal adhesions, 8 cases septal deviation and concha bullosa, 8 cases abnormal size fistula, 6 cases rhinosinusitis, 6 cases contact granuloma, 3 cases of pouch, 4 cases closed ostium, 10 cases no definite cause could be found (functional failure).

Negative dye clearance test and non-detection of fluorescein on irrigatiom in 55 patients.

Delayed dye clearance but detection of fluorescein on irrigation in 10 patients (functional failure).

Conclusions: Nasal endoscopy is very important in diagnosing causes of failure of external DCR. Nasal endoscopy is essential before and after external DCR. DCR should be done by a team work of rhinologist and ophthalmologist. Study of mucociliary clearance of lacrimal pathway will help to improve our surgeries and whether to do small or large fenestra technique.

8-

**Endoscopic assisted probing for symptomatic congenital nasolacrimal duct obstruction after one year of age**

Purpose: When probing treatment for congenital nasolacrimal duct obstruction fails, it is often unclear whether it is due to technical difficulties or the severity of obstruction. Therefore our aim was to study the causes of probing failure and how to treat them.

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Conclusions: Nasolacrimal duct probing under direct nasal endoscopic visualization can be considered as the standard treatment of CNLDO as it minimizes intranasal trauma and leads to a better surgical outcome.

Management of obstructive sleep apnea using oral appliance with magnetic versus increase vertical dimension

Statement of Problem: Oral devices may be helpful in the management of obstructive sleep apnea by improving upper airway potency. Purpose: Management of obstructive sleep apnea using oral appliance with magnetic versus oral appliance with increased vertical dimension. Material and Methods: 12 patients with mild to moderate obstructive sleep apnea were evaluated in this study before and after wearing devices for six months. The patients randomly divided into two equal groups (A and B). Group A used oral appliances with magnetic for six month Patients in group B wear oral appliances with increased vertical dimension. Evaluation was done by Polysomnograph, clinical findings and cephalometric x-rays. Results: The results of this study revealed that improvement of clinical finding, symptoms and apnea index for patients wearing two types of oral appliance. Conclusions: It can be concluded that oral appliance, with magnetic and increase vertical dimension, make improvement for OSA patients oral appliances with magnets are more effective in management of mild and moderate obstructive sleep apnea in comparison to appliances with increased vertical dimension.

Transnasal endoscopic management of recurrent juvenile nasopharyngeal angiofibroma

Objectives: The purpose of this study was to present our experience with definitive endoscopic surgical management of the recurrent juvenile nasopharyngeal angiofibroma. Study design: Retrospective study. Setting: Tertiary care centre. Materials and methods: This study includes 13 male adolescence patients with recurrent nasopharyngeal angiofibroma who received treatment at our centre between 2005 and 2010. The patient age ranged from 12 to 21 years (mean age, 15.7 years). Endoscopic two surgeons’ technique had been used. Follow up MRI every four months. Results: Complete removal of the recurrent tumor was achieved in 10 cases. Three patients had incomplete removal with further recurrences. These recurrences were two in lateral wall of the sphenoid sinus (2 patients), and soft palate (one patient). Conclusion: Recurrent JNAs are residual disease resulting from incomplete removal of the primary tumor. Transnasal endoscopic sinus surgery is an effective method for treating recurrent
JNA. Follow up is essential and integral point in management of JNAs.

Transnasal endoscopic management of angiofibroma extending to pterygopalatine and infratemporal fossae

Abstract

Introduction: Surgical approaches to the pterygopalatine and infratemporal fossae are complex and cause significant morbidity. The commonest benign tumour to extend to the pterygopalatine and infratemporal fossae is angiofibroma.

Patients and methods: This prospective study included 15 male patients aged 12–27 years with recurrent, severe epistaxis. After computed tomography and magnetic resonance imaging, a modified Wormald and Robinson’s two-surgeon approach was used. Follow up, with endoscopy and magnetic resonance imaging, ranged from two to five years.

Results: Twelve patients were cured (endoscopically and radiologically). Three patients suffered recurrence, one each in the lateral sphenoid wall, pterygoid canal and infratemporal fossa. Revision surgery was performed, but one patient suffered another recurrence (lateral sphenoid wall with cavernous sinus infiltration) and was referred for gamma knife surgery.

Conclusion: This endoscopic two-surgeon technique is an excellent approach for managing angiofibroma extending to the pterygopalatine and infratemporal fossae. Our modification markedly decreased morbidity by avoiding septum opening and sublabial incision, and by enabling better haemostasis (via maxillary artery control). Recurrence may be minimised by careful examination of the lateral sphenoid wall, pterygoid canal and infratemporal fossa pterygoid muscles.

Endoscopic devascularisation of sphenopalatine bundle in intractable posterior epistaxis: technique, efficacy and safety.

Abstract

Objective: To evaluate endoscopic cauterisation of the sphenopalatine neurovascular bundle, as treatment for intractable posterior epistaxis, with regard to efficacy, safety and post-operative sequelae. Patients and methods: A prospective study reviewed 42 patients with severe posterior epistaxis who were treated with endoscopic cauterisation of the sphenopalatine neurovascular bundle, over a 17-month period. Results: Hypertension and hepatic disease were present as predisposing factors in 66.7 and 35.7 per cent of patients,
respectively. Branching of the sphenopalatine artery at its foramen was present in more than 85 per cent of patients. The success rate was 100 per cent, with no recurrent epistaxis in the follow-up period. Severe nasal dryness was present in only four patients (9.5 per cent); hypoaesthesia was found in the nasal mucosa of eight patients, without any patient complaints. Conclusion: Endoscopic sphenopalatine neurovascular bundle cauterisation is an effective treatment for refractory posterior epistaxis. In this study, neurovascular bundle cauterisation did not cause any neurological deficits or major complications.

13-

Eotaxin, RANTES and tumor necrosis factor alpha levels in allergic rhinitis

Abstract Objectives: The objectives of this study were to estimate the levels of eotaxin, RANTES and tumor necrosing factor-1 in allergic rhinitis and their relation to disease severity. Study design: Prospective study. Setting: Mansoura University Hospital. Patients and methods: Twenty nine patients suffering from allergic rhinitis were included in this study (19 patients with allergic rhinitis and 10 patients control group). The patients underwent estimation of eotaxin, RANTES, TNF-1 in the nasal wash using Elisa technique. The patients were divided according to the disease severity into mild allergic rhinitis, severe allergic rhinitis and control groups. Results: The mean values of eotaxin, RANTES, TNF-1 in severe allergic rhinitis (33.6 ±11.07 pg/ml, 72.17 ±87.61 pg/ml, 25.47 ±4.04 pg/ml) were statistically higher than in mild allergic rhinitis (9.80 ±6.79 pg/ml, 10.50 ±6.90 pg/ml, 12.99 ±3.27 pg/ml) and the mean values of all these parameters were higher in both groups compared to control group (0.6 ±0.69 pg/ml, 0.65 ±0.74 pg/ml, 0.63 ±0.54 pg/ml). Conclusion: This study suggests the role of local chemokines in the pathogenesis of allergic rhinitis as well as their possible relation to the severity of the disease which may direct the attention to therapeutic trials against these locally produced chemokines

14-

Functional endoscopic sinus surgery in children: predictive factors of outcome

Abstract The main objective of this study is to assess the results of functional endoscopic sinus surgery in children and to determine which factors independently influence the postoperative results. It is a prospective study by Mansoura University Hospital. 87 patients with different applications of pediatric endoscopic sinus surgery (PESS) chronic rhinosinusitis (CRS) with nasal allergy (45 patients), CRS without nasal allergy (36 patients) and CRS with polypsis (6 patients) from 2005 to 2010 were included. All children
underwent endoscopic sinus surgery. All patients were clinically, radiologically and endoscopically monitored. In this study, the overall success rate was 87.69%, the success rate for CRS with nasal allergy was 87.5%, the success rate for CRS without nasal allergy was 85.7% and the success rate for CRS with polyposis was 93%. Regarding the patients' age, it could aVect the surgical score value (X2 = 9.446 and P* = 0.009). There was signiWcant relation between type of the preoperative disease extent, adenoidectomy, second look operation and postoperative improvement. There was no signiWcant relation between type of the preoperative disease or previous surgery and postoperative improvement. In conclusion, postoperative improvement was signiWcantly correlated with extent of preoperative disease, adenoidectomy and second look operation and not signiWcantly correlated with type of the preoperative disease or previous surgery. The results of PESS are inXuenced by age group, a younger age group is associated with more adhesions and recurrences and an older age group is associated with blood loss and higher surgical score. All these variables are contributing in the outcome of PESS.

15-

Endoscopic surgery in pediatric recurrent antrochoanal polyp, rule of wide ostium.

Abstract

OBJECTIVE: To evaluate the use of wide middle meatal antrostomy in recurrent antrochoanal polyp (ACP) in children as regard technical difficulty, efficacy, and safety in children.

STUDY DESIGN: Retrospective study.

PATIENTS AND METHODS: In a retrospective study, 12 children with unilateral recurrent ACP (5 left-sided, 7 right-sided). All the ACPs were documented by preoperative endoscopy and computer tomographic (CT) scans. All cases were treated using endoscopic wide middle meatal antrostomy. The average age at the onset of symptoms was 9.3 years (median age: 10 years; range: 6-15 years).

RESULTS: Postoperative improvement in all cases was achieved using both subjective measures (symptoms improvement) and objective measures (radiological and endoscopical). No postoperative complications or recurrence during the follow up period.

CONCLUSIONS: Endoscopic wide middle meatal antrostomy is a useful and easily applicable technique to manage recurrent antrochoanal 3 polyp in children. Managing associated pathology as turbinate hypertrophy, associated adenoids, anterior ethmoidectomy, uncinenectomy and endoscopic limited septoplasty should be put in mind in order to improve ventilations. Powered instrumentations, angled endoscopes (45 and 70°) and angled instrumentations can assure complete clearance of the polyp by
identifying the origin of polyp in maxillary antrum.

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**Eotaxin, RANTES and tumor necrosis factor alpha levels in allergic rhinitis**

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Study design: Prospective study.

Setting: Mansoura University Hospital.

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Results: The mean values of eotaxin, RANTES, TNF-1 in severe allergic rhinitis (33.6 ±11.07 pg/ml, 72.17 87.61 ±1 pg/ml, 25.47 4.04 ±1 pg/ml) were statistically higher than in mild allergic rhinitis (9.80 ±6.79 pg/ml, 10.50 6.90 ±1 pg/ml, 12.993.27 ±1 pg/ml) and the mean values of all these parameters were higher in both groups compared to control group (0.60.69 ±1 pg/ml, 0.65 0.74 ±1 pg/ml, 0.63 0.54 ±1 pg/ml).

17-

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surgery was performed, but one patient suffered another recurrence (lateral sphenoid wall with cavernous sinus infiltration) and was referred for gamma knife surgery.

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Gemcitabine-based induction chemotherapy and concurrent with radiation in advanced head and neck cancer

Abstract To evaluate the efficacy and toxicity of gemcitabine-based induction chemotherapy followed by concurrent gemcitabine and radiotherapy in advanced squamous cell carcinoma of head and neck. A total of 28 patients with locally advanced squamous cell carcinoma of the head and neck were enrolled. All patients were treated with 2 cycles of induction gemcitabine 1 gm/m2 on days 1 and 8 plus cisplatin 75 mg/m2 on day 1 of a 3-week cycles followed by conventionally fractionated radiotherapy to 70 Gy in 35 fractions concurrent with weekly gemcitabine 100 mg/m2 within 2 h before radiotherapy. Median age was 56.5 years (range, 30–68). Four patients (14.3 %) achieved complete response (CR) and 19 patients (67.9 %) had partial response (PR) after induction chemotherapy. After concurrent chemo-radiotherapy, we reported 17 (60.7 %) CR and 8 (28.6 %) PR. Median loco-regional recurrence-free survival, progression-free survival, and overall survival were 17, 12.5, and 21 months, respectively. Performance status, T stage, AJCC stage, and response to chemo-radiation were found to have significant impact on survival. Acute grade 3 toxicity of concurrent chemo-radiation included 35.7 % dysphagia, 25 % stomatitis, and 10.7 % neutropenia, whereas late grade 3 toxicity included xerostomia in 7.1 % and stomatitis in 3.6 % of patients. Gemcitabine-based induction and concurrent chemo-radiotherapy is effective treatment for locally advanced squamous cell carcinoma of head and neck with acceptable and manageable toxicity. Optimizing dose and schedule of gemcitabine-based chemo-radiation is still needed.