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- Local production of IgE in nasal polyps of allergic rhinitis patients.
The mechanism of development of the nasal polyp is still unclear. Up to 1970s, allergy was known as a main cause of nasal polyp. The generation of total IgE and specific IgE in nasal polyp was found to suggest the existence of localized nasal allergy which is assumed to play a some role for the development of nasal polyp. The presence of specific IgE on skin mast cell (skin test) and/or the existence of specific IgE in serum (RAST) indicates sensitization, but not necessarily clinical allergy, in the target organ. Discrepancies between sensitization and disease could be explained by local IgE.
production. In this study, we aimed to confirm the local production of IgE antibody from nasal polyp and to evaluate the difference between atorics and non-atomics. Patients were classified into test group which included 16 allergic rhinitis patients with nasal polyps and control group which included 16 non atopic patients with nasal polyps. The diagnosis of allergic rhinitis was confirmed by clinical history, clinical examination, positive skin test for a certain inhalant allergen and elevated total serum IgE. Serum and polyp fluid IgE were measured by ELISA. The amount of serum and polyp tissue albumin was determined by spectrophotometric analysis. The polyp tissue total IgE/albumin and serum total IgE/albumin were significantly higher in 16 atorics (33.1) than in the 16 non-atomics (14.1) with no significant difference in the albumin level between the two groups. The ratio of polyp total IgE/albumin to serum total IgE was greater than 1 in 10 cases of 16 atorics with nasal polyposis and 6 cases of 16 non atomics suggesting that IgE antibody could be locally produced from the nasal polyp tissue of non atorics as well as atopic subjects.

3-

**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); hypoesthesia 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.

4-

**Endoscopic cauterization of the sphenopalatine artery in pediatric intractable posterior epistaxis**

Objective: To evaluate the rule of endoscopic sphenopalatine artery cauterization in pediatric age group as regard technical difficulty, efficacy, and safety in children.

Study design: Retrospective study.

Patients and methods: From March 2008 to February 2011, 7 children (4 male, 3 female) with idiopathic intractable posterior epistaxis, patients' age ranged from 8 to 14 years (10.7 average). All patients underwent preoperative laboratory investigations to exclude bleeding or coagulation.
disorders and CT paranasal sinus. All patients underwent endoscopic sphenopalatine artery cauterization (7 procedures for 7 patients, 5 were in the right side and 2 were in the left side). Results: postoperative evaluation showed no recurrence for epistaxis during the postoperative follow up period. Also, no complications were found. The average follow up period was 17.8 months.

Conclusions: Endoscopic cauterization of sphenopalatine artery in pediatric age group was effective and safe technique providing that the surgeon has a good experience regarding pediatric endoscopic sinonasal anatomy. Minimal endoscopic technique in this age group is important to avoid unnecessary operative and postoperative complications. Avoid excessive cauterization to lateral nasal wall in this technique is crucial to avoid unexpected nerve injury or tissue necrosis.

5-

**Migrating Laryngeal Foreign Body**

We report the case of a 6-year-old boy who presented with a 2-month history of stridor and respiratory difficulty, preceded 1 month earlier by dry cough. The evaluation before admission revealed glottic narrowing due to diffuse inflammatory changes. On examination, the patient was seen to have biphasic stridor and respiratory distress with diminished breath sounds throughout both lung fields. Laryngoscopy revealed multiple polyps and granulation tissue causing marked laryngeal narrowing. No foreign body was detected in the larynx. Elective tracheostomy was performed before proceeding to bronchoscopy. The latter procedure revealed a foreign body in the left main bronchus. One week after the foreign body extraction, repeat bronchoscopy revealed nearly total disappearance of polyps and granulation tissues. The tracheostomy tube was removed and the patient recovered uneventfully. To our knowledge, this is the first reported case of stridor caused by a migrating laryngeal foreign body. A thorough endobronchial examination should be carried out in patients with unexplained laryngeal polyps and granulation tissue.

6-

**Choanal adenoid in adults with persistent nasal symptoms: endoscopic management to avoid misdiagnosis and unsuccessful surgeries**

Abstract Our objective was to confirm the necessity of
nasal endoscopy in the diagnosis and treatment of choanal adenoid in adult patients with persistent bilateral nasal obstruction and recurrent nasal infections that may lead to repeated unsuccessful medical and surgical procedures. We present a series of 64 adult patients (18–37 years: 40 males, 24 females). All patients had persistent bilateral nasal obstruction and recurrent nasal infections. There was history of repeated medical and surgical unsuccessful procedures. Choanal adenoid was confirmed by nasal endoscopy and CT scanning. Absence of adenoid tissues in the nasopharynx was confirmed in all cases. Surgical removal of choanal adenoids was undertaken in all cases endoscopically.

Some other surgical procedures like straightening of a deviated septum or reduction of a hypertrophied turbinate were undertaken in some indicated cases. Most of the cases experienced complete relief from obstruction and return of a patent nasal airway, and improvement of associated complaints such as dry mouth and persistent cough. A thorough review of this phenomenon and its clinical relevance, and methods of diagnosis and management are presented. We recommend a thorough nasal endoscopy as a routine in cases of persistent nasal obstruction even in the presence of an apparent cause of obstruction.

7-

**Single flap with three pedicles, bone patê and split-thickness skin graft for immediate mastoid obliteration after canal wall down mastoidectomy**

Abstract Our objective was to evaluate single flap with three pedicles, bone patê and split-thickness skin graft for mastoid cavity obliteration after canal wall down mastoidectomy done for chronic suppurative otitis media and its efficacy in producing a small and dry mastoid cavity. Over a period of 7 years (2003–2010), 100 consecutive procedures in 100 patients with chronic suppurative otitis media were performed at the Mansoura University Hospital (Egypt) with a minimum follow-up of 12 months (range 12–72 months). All patients had canal wall down mastoidectomy with simultaneous tympanoplasty. Anteriorly, inferiorly and superiorly pedicled periosteal flap, which was covered by split-thickness skin graft, was used in conjunction with autologous bone patê to obliterate the mastoid cavity. Postoperative evaluation was done based on certain criteria and grading system from 0 to 3. Grade 0 is considered perfect, grade 3 represents failure and grade 1 and 2 are adequate but not perfect. The summation of grade 0 (perfect dry) and grade 1 (adequate dry) was 88, 95,
97.23 and 98.44% after follow-up periods of 12, 24, 36 and 48 months, and 100% after 60 and 72 months. Periosteal flap based on three pedicles (anterior, inferior and superior) covering the bone plate is simple, perfect and adequate for obliteration of mastoid cavity after canal wall down mastoidectomy. Split-thickness skin graft is important to hasten the epithelialization that helps to obtain a dry cavity. The use of local tissues saves costs and avoids complications from the synthetic materials.

8-

Transnasal endoscopic management of angiofibroma extending to pterygopalatine and infratemporal fossae

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.

9-

Endoscopic management of a pediatric nasoethmoidal mucocele with intraorbital extension

Objective

To evaluate the transnasal endoscopic marsupialization of a pediatric nasoethmoidal
mucocele with intraorbital extension in terms of technique, difficulty, and surgical outcome.

Design
Prospective study.

Patients and methods
Seven patients presented with a mucocele with intraorbital extension; they ranged in age from 8 to 14 years (average 11 years), and were treated using the transnasal endoscopic approach from March 2008 to March 2010. All patients underwent transnasal endoscopic marsupialization and were monitored clinically, radiologically, and endoscopically for a mean follow-up period of 15.3 months.

Results
Postoperative nasal examination showed no findings with improved orbital manifestations in all cases. Also, nasal congestion, obstruction, and postnasal discharge disappeared completely. Postoperative computed tomography evaluation indicated a significant improvement on comparison with the preoperative computed tomography score. No major complications were found in the study.

Conclusion
Transnasal endoscopic marsupialization of a pediatric mucocele with intraorbital extension is a safe technique and can be carried out successfully. Combined intensive medical treatment with surgery is important in a mucocele with an orbital manifestation. Nevertheless, this technique requires good experience with the relevant anatomy in a pediatric age group.