RECURRENT NASAL POLYPOSIS

ESSAY

Submitted for partial fulfillment of master degree of otorhinolaryngology

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بسم الله الرحمن الرحيم

﴿ وما أوتيتم من العلم إلا قليلا ﴾

صدق الله العظيم

جزء من الآيه ٨٥

سورة الإسراء

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TO MY FAMILY

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INTRODUCTION

The respiratory and olfactory functions of the nose were clearly recognized in ancient Egypt, the importance of a patent nasal airway is acknowledged in the following aphorism, alive and healthy is he who has breathing through his nose *(Charles 1989)*.

Nasal Polyps are a common clinical condition which despite differing theories of aetiology, remains a poorly understood disease. They are the nasal manifestations of an unstable respiratory mucosa which may be limited to the nose and sinuses or extend into the chest , the common histological features found in tissue removed from the ethmoid sinuses and lower respiratory tract make a single aetiology attractive . Two main theories have emerged, the allergic and infective *(Drake, et al , 1984)* .

The formation of nasal polyps is often associated with diseases such as sinusitis, asprin idiosyncracy and cystic fibrosis. Although the incidence of nasal polyp has declined lately,it is still a frequently encountered disease in every day clinical practice . The mechanisms underlying the formation of nasal polyp and the reason why it recurs remain unknown . Since local infections and allergy are suggested to contribute in the formation of nasal polyps and arachidonic acid metabolites (AAMs) are involved in both allergic and infectious inflammations , *Ogino, et al ,(1993)* suspect that AAMs may play an important role in the pathogenesis of nasal polypi .

Despite these two deffering theories (allergic and infective) of aetiology, nasal polyps present with multiple symptoms in the majority of patients and , irrespective of treatment, are prone to recurrence which may be severe *(Drake, et al , 1984)*.

Management of nasal polyposis is still an otolaryngolic problem, that still had no definite lines of treatment and no treatment can give chance for no recurrence, if this statement is true for nasal polyps , it is then more applicable on recurrent cases

AIM OF THE ESSAY

Is to elucidate the different causes predisposing to the occurrence of nasal polyposis and predispose to it's recurrence .

To study the different prophylactic measures to avoid recurrence .

To clarify the differences in the investigations used for cases of nasal polypi seen for the first time and those that must be done for cases of recurrent polyposis . New trends in treatment of recurrent cases .

REVIEW OF LITERATURE

CHAPTER 1

ANATOMY OF THE NOSE AND PARANASAL SINUSES

Anatomy of the nose and paranasal sinuses

Anatomy of the nose and paranasal sinuses should be familiar to the rhinologist during Discussing recurrent nasal polyposis , also the endoscopic and Radiological anatomy , in particular the relation between the ethmoid cells and the surrounding structures and some of the anatomical variations in this region all these anatomical knowledge will be reviewed in the following chapters.

Anatomy of the nose

Nasal cavities begin at the pyriform aperature and end at the posterior choanae , other limiting boundaries of the nasal cavities are the roof , floor, septal wall and lateral wall .The roof is formed anteriorly by the nasal bones ,the nasal spine of the frontal bone and the floor of the frontal sinus , mid part is formed by the cribriform plate of the ethmoid bone which is penetrated by olfactory filaments , posteriorly slopes down to the posterior choana along the anterior wall of the sphenoid sinus and the body of the sphenoid bone *(Graney and Baker 1993)*.

Approximately three fourths of the floor of the nasal cavity is formed by the palatine process of the maxillary bone , posteriorly the remaining part is formed by the horizontal process of the palatine bone *(Graney and Baker 1993)*.

The nasal septum is formed by the vomer, perpendicular plate of the ethmoid bone and quadrilateral cartilage , additional bony reinforcements to the septum are the nasal crest of maxilla ,the anterior nasal spine of maxillae , the rostrum and crest of sphenoid bone , the nasal spine of frontal bones and the crests of the nasal bones *(Graney and Baker 1993, Straatsma and Straatsma 1951)*.

The lateral wall is formed by the contribution of several bones :

The nasal surface of the maxilla , inferior concha , superior and middle conchae of the ethmoid bone and perpendicular plate of the palatine bone (fig. 1) *(Graney and Baker 1993)*. Beneath each conchae there is a meatus,

each meatus is named after the concha that form its roof , posterosuperior to the superior concha is the space known as the sphenoethmoid recess , which is the drainage site of the sphenoid sinus , inferior to the superior cancha in the superior meatus there are usually one or two openings for the posterior ethmoid cells *(Carter and Runge 1988)*.

The most complex of the three meati lies deep to the middle concha, elevation of the middle concha usually reveals a rounded prominence termed the ethmoid bulla which overlies a slit like opening termed the hiatus semilunaris(fig .2). One to three openings on the surface of the bulla represent the drainage sites of the middle and anterior ethmoid cells. The hiatus semilunaris is in fact the opening of the maxillary sinus .Inferiorly the bony margin of the hiatus semilunaris is formed by the unciform process of the ethmoid bone . Inferior to the unciform process down to the level of the inferior concha there is no bony wall limiting the medial part of the maxillary sinus (fig.1), this non bony area is approximately circular (1 to 2 cm in diameter) and is closed only by a fibrous membrane , which is , in turn , covered by nasal mucosa , named anterior fontanell *(Graney and Baker 1993)* .

In the anterosuperior portion of the middle meatus , the middle concha narrows into the infundibulum , where an opening can be found for the frontal sinus *(Carter and Runge 1988)*.

Inferior to the inferior turbinate there is the inferior meatus which receive the opening of the nasolacrimal duct in the anterosuperior portion of the point that the inferior concha contacts the lateral wall of the nasal cavity *(Graney and Baker 1993)*.

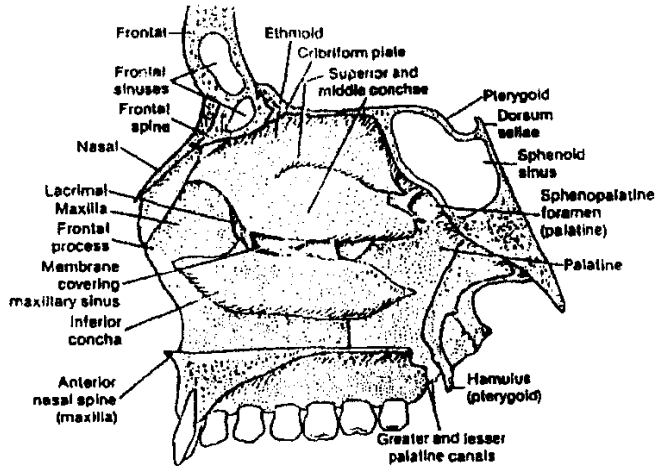

Fig. 1 : Bones of lateral wall of nasal cavity
(After Graney and Baker 1993).

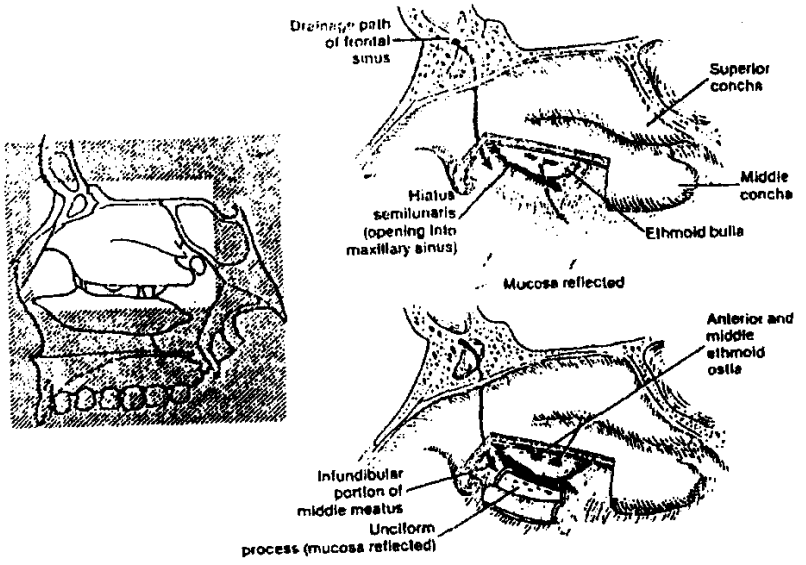

Fig. 2 : Osseous boundaries of hiatus semilunaris, unciform process, and ethmoid bulla . Inset. Area of nasal cavity magnified
(After Graney and Baker 1993).