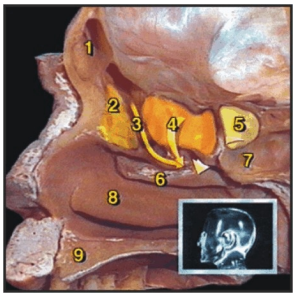
ORIGINAL PROF-906

RECURRENT ETHMOIDAL POLYPI;
SURGICAL MANAGEMENT



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ABSTRACT... saeedent1968@hotmail.com. The management of recurrent ethmoidal polypi is an important issue. This study was carried out to compare the results of various surgical modalities which are used for recurrent ethmoidal polypi. **Design:** Prospective study. **Setting** Department of ENT Allied Hospital Faisalabad. **Period:** From Jan 2001 to Dec 2003. **Material & Methods:** Total 150 patients suffering from recurrent ethmoidal polypi 102 males (68%) and 48 females (32%) between 05 years to 90 years of age. The highest incidence was seen during fourth decade of life (27%). The incidence of recurrent ethmoidal polypi was 50 cases per year. The majority of cases were admitted through out patient department (67%). The highest incidence of patients was seen during the months of March and August (12%). The majority of patients were belonging to poor class (62%). The most common presenting symptom was nasal obstruction (95%). The most common associated disease in patients with recurrent ethmoidal polypi was deflected nasal septum (52%). Nasal polypectomy was carried out in majority of patients (34%). The success rate was highest with external ethmoidectomy (97%) and lowest with simple nasal polypectomy (75%). Many surgical modalities are available for the treatment of recurrent ethmoidal polypi, every procedure has got its own success and complication rate therefore it is suggested finally that when a surgical modality is adopted it should be based upon patient history, investigations, extent and severity of disease, more over regular follow up of the disease is required to control the disease.

INTRODUCTION

The word polyp comes from Greek though it was later on Latinized which means many footed (poly-pous). Nasal polypi are swellings of the sino-nasal mucosa. Initially all polypoidal conditions were grouped together until histological classification helped to differentiate them from neoplastic conditions[1]. Nasal polyp tissues have a large amount of histamine and have eosinophil infiltration[2]. Nasal polypi of patient with allergic rhinitis or asthma frequently recur after polypectomy[3]. Recurrent nasal polypi are one of the major leading problems among nasal disease in all developing countries that equally affects all the racial and socio-economical groups with a little preponderance in male ranging 2:1 to 4:1[4].

Nasal polypi are more common in asthmatics and rural inhabitants[3]. It is observed that between 1 in 1000 of the children and 20 in 1000 of the adult population would

have ethmoidal polypi once or more in their lives[4]. The environmental and social trends significantly influence its prevalence and mode of presentation[5]. The association of ethmoidal polypi with allergic rhinitis, vasomotor rhinitis and childhood asthma have been documented[3]. The rate of recurrence is variable and different studies show that just over 40% present for the first time and 5% have had five or more polypectomies[6].

Ethmoidal polypi appears as soft, smooth masses, translucent, white and opaque, yellowish or pink in color and occasionally fleshy[7]. Histological examination shows oedema of submucosa and infiltration with eosinophils and round cells[7]. There is significantly relationship between the eosinophils infiltration of nasal polypi and local IgE production[2].

The exact aetiology is not known but different theories put forward regarding development of ethmoidal polypi are Bernoulli phenomenon, polysaccharide changes, vasomotor imbalance[8], infection[9,10,11] and allergy[2,12,13,14].

Clinically the patient of ethmoidal polypi presents with nasal obstruction, hyposmia, postnasal drip. On examination the nasal patency is reduced, hyposmia or anosmia, the polypi are always visible on anterior rhinoscopy as pearly white multiple grape like masses, in certain cases there might be proptosis or hypertelorism.

In addition to general investigations the special investigations required are plain radiology, MRI and CAT scan of nose and parnasal sinusis. The nasal polypi are to be differentiated from neoplasia and hypertrophic turbinates. Treatment of recurrent ethmoidal polypi comprises of both medical and surgical modalities. The medical modalities includes local and systemic Antihistamines and local steroids[15,16].

Among the surgical modalities various surgical procedures are used depending upon the extent and recurrence of polypi; nasal polypectomy[17], nasal polytectomy with intranasal ethmoidectomy[18,19,20,21,22,23], transantral ethmoidectomy[24,25], external ethmoidectomy and FESS (functional endoscopic sinus surgery)[26].

MATERIAL AND METHODS

It was a prospective study conducted upon 150 patients suffering from recurrent ethmoidal polyp in the department of ENT Allied Hospital Faisalabad from Jan 2001 to Dec 2003. The patients were admitted and detailed history, clinical examination, routine investigations and special investigations were carried out to assess the extent of polypi.

Standard performa was prepared dually filled for each patient. Only those patients were included in study who were suffering from recurrent ethmoidal polypi and were available for follow up and those patients who were unfit for surgery, having polypi for the first time and patients of non-recurrent polypi were excluded from study. The follow up of cases was carried out from 6M to 24M. The surgical modalities used were nasal polypectomy, intranasal ethmoidectomy, transantral ethmoidectomy and external ethmoidectomy. The FESS (functional endoscopic sinus surgery) although an effective tool for the surgical treatment of nasal polypi was not included in the study because this facility is not available in the ENT department of Allied Hospital Faisalabad.

Table-I. Age incidence in 150 patients of recurrent ethmoidal polypi

Age group	No of patients	% Age
05-10 Yrs	03	02
11-20 Yrs	12	08
21-30 Yrs	39	26
31-40 Yrs	40	27
41-50 Yrs	24	16
51-60 Yrs	21	14
61-70 Yrs	05	03
71-80 Yrs	03	02
81-90 Yrs	03	02
Total	150	100

RESULTS

Table-II. Sex distribution in patients with ethmoidal polypi

Sex	No of patients	% Age
Male	102	68
Female	48	32
Total	150	100

Table-III. Seasonal variations in incidence of recurrent ethmoidal polypi

Months	No of patients	% Age
January	14	09
February	16	11
March	18	12
April	16	11
May	06	04
June	11	07
July	10	07
August	18	12
September	18	12
October	15	10
November	11	07
December	15	10

Total 150 patients suffering from recurrent ethmoidal polypi 102 males (68%) and 48 females (32%) between o5 years to 90 years of age. The highest incidence was seen during fourth decade of life (26%).

The incidence of recurrent ethmoidal polypi was 50 cases per year. The majority of cases were admitted through out patients department (76%). The highest incidence of patients was seen during the months of March and August (12%).

Table-IV. Socioeconomic status of patients

Class	No of patients	% Age
Poor	93	62
Middle	42	28
Upper	15	10
Total	150	100

Table-V. Disease pattern in patients with recurrent ethmoidal polypi

Disease	No of patients	% Age
Chronic symptoms	132	88
Acute symptoms	12	08
Acute symptoms with complication	06	04
Total	150	100

Table-VI. Presenting symptoms in patients of recurrent ethmoidal polypi

Symptoms	No of patients	% Age
Nasal obstruction	143	95
Rhinorrhea	135	90
Post nasal discharge	78	52
Sneezing	75	50
Headache	70	46
Facial pain	40	26
Disturbance of sense of smell	31	20
Fever	18	12
Epistaxis	09	06
External deformity	07	04
Diplopia	01	0.5

The majority of patients were belonging to poor class

(62%). The most common presenting symptom was nasal obstruction (95%). The most common associated disease in patients with recurrent ethmoidal polypi was deflected nasal septum (52%).

Table-VII. Associated disease in patients of recurrent ethmoidal polypi

Disease	No of patients	% Age
DNS	78	52
Maxillary sinusitis	72	48
Hypertrophied turbinates	70	46
Tonsillitis	33	22
Asthma	13	08
External deformity	12	08

Table-VIII. Surgical approaches used in patients with recurrent ethmoidal polypi

Surgical approach	No of patients	% Age
Simple polypectomy	52	34
Nasal polypectomy + intranasal ethmoidectomy	36	24
Transantral ethmoidectomy	32	22
External ethmoidectomy	30	20

Nasal polypectomy was carried out in the majority of patients (34%). The success rate was highest with external ethmoidectomy (97%). The most common complication was nasal adhesions and recurrence of polypi which was commonest with simple nasal polypectomy (15%). The recurrence rate was maximal in cases of simple nasal polypectomy (26%) and minimal after external ethmoidectomy (3%).

DISCUSSION

The different surgical modalities are available for the management of ethmoidal polypi but recurrence is still a major hazard[27]. This is a three years study based on the evaluation of effectiveness of various surgical modalities for recurrent ethmoidal polypi. In this study 150 patients presenting with recurrent ethmoidal polypi were analysed.

The incidence was higher in males as compared with females and younger age group as compared to children and older age group the same findings were seen in the studies conducted by Mushraf Baig[28] and Talat Mehmood[29]. The exact cause of its higher incidence in male is still unknown. During the months of March, April September and October higher incidence was observed which may be due to higher count of pollens in the air during these months.

Table-IX. Success rate of various surgical modalities

Surgical approach	No of patients	% Age
Simple polypectomy	39 out of 52	75%
Nasal polypectomy + intranasal ethmoidectomy	30 out of 36	83%
Transantral ethmoidectomy	28 out of 32	88%
External ethmoidectomy	29 out of 30	97%

Table-X. Recurrence rate of various surgical modalities

Surgical approach	No of patients	% Age
Simple polypectomy	14 out of 52	26%
Nasal polypectomy + intranasal ethmoidectomy	06 out of 36	16%
Transantral ethmoidectomy	04 out of 32	12%
External ethmoidectomy	01 out of 30	03%

The highest incidence was also observed in poor socioeconomic class which may be due to ignorance and lack of proper health facilities. Regarding etiology; allergy looks to be an important factor because nasal polypi tissues have a large amount of histamines and eosinophil infiltration[2,12,13,14]. Nasal polypi of patients with allergic rhinitis or asthma frequently recur after polypectomy [30]. It was observed that conditions for mast cell growth differ between polypi and other diseases and condition which effect mast cell may contribute to polypi development[30]. The highest success rate was seen with external ethmoidectomy as compared to simple polypectomy which is also proved by the studies of Mushraf Baig[28] and Talat Mehmood[28]. Computed tomography (CAT Scan) may be used as a preoperative evaluation in polypi surgery and to find out reasons for failure of surgery and recurrence of the disease[37].

Table-XI. Comparison between complication rates of various surgical modalities				
Complication	**Nasal polypectomy (52 cases)**	**Nasal polypectomy + INE (36 cases)**	**Transantral ethmoidectomy (32 cases)**	**External ethmoidectomy (30 cases)**
Minor Complications				
Synechiae	15	03	02	01
Ecchymosis	01	01	01	01
Surgical emphysema	00	00	00	00
Epistaxis	00	01	01	00
Infection	05	01	01	00
Recurrence	14	06	04	01
Numbness	00	00	02	01
Major Complication				
Severe epistaxis	00	01	01	00
Orbital edema	00	00	01	01
Transient diplopia	00	00	00	01
Retro-orbital haemorrhage	00	00	00	00
CSF leak/meningitis	00	00	00	00
Percentage	67%	36%	40%	20%

CONCLUSION

Various patients with recurrent ethmoidal polypi were treated by different surgical modalities. Every operation has its own merits and demerits hence it is suggested whatever surgical procedure is adopted it must be planned keeping in view the patient history, investigations and aggressiveness of recurrent ethmoidal polypi in addition to it regular follow up of the disease is strongly recommended.

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