Original Research Article

Clinical profile of patients presenting with nasal polyps

Jyoti Tugave[1], V S Patil[2*]

[1]Resident, [2]Professor, Department of ENT, MRMC, Gulberga, Karnataka, INDIA.
Email: jyotitugave@yahoo.com

Abstract

Background: The most common benign mass in the nose is the nasal polyp. Nasal polyps are a medically recognized condition since the time of ancient Egyptians. Interestingly, this condition affects only man and chimpanzee. In fact nasal polyps are not true neoplasms and they must be distinguished from more serious pathology by histopathological examination **Methodology:** Patients treated between study periods were subjected to a comprehensive history and clinical evaluation and histopathological examination as per the proforma designed for this study. Records of patients treated between study period were retrieved from medical records section of Medical College to get the required data. **Results:** The most common symptom was nasal obstruction found in 28 patients (93.3%), sneezing was next complaint present in 16 patients (53.33%) followed by headache in 15 patients (50%) and nasal discharge in 14 (46.6%), smell disturbances in 10 (33.3%), Rhinolalia clause in 7 patients (23.33%) of Antrochoanal polyp, post natal drip and epistaxis in 2 patients each (6.6%). **Conclusion:** According to the clinical findings 80% of ethmoidal polyps presented bilaterally, where asantrochoanal polyps had 100% unilateral presentation with predominance of right side (57%).
Key Words: Nasal Polyps, Antrochoanal Polyps, Rhinolalia.

[*]**Address for Correspondence:**
Dr. V. S. Patil, Professor, Department of ENT, MRMC, Gulberga, Karnataka, INDIA.
Email: jyotitugave@yahoo.com
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INTRODUCTION

The antiquity of the clinical recognition of nasal polyps as a troublesome disease could be assessed by the fact that it has been recorded in Indian scriptures as far back as 1000 B.C. Subsequent reference to "poly-pous" (which is the Greek language means 'many-footed') diseases are traced Hippocrates (460-370 BC) and to prominent physicians of Arabia. Even though Indian scripture description of the nasal polyps precede Hippocrates by several centuries, Hippocrates has been very widely recognized as 'Father of Rhinology'. In fact, Hippocrates 'sponge method' of polyp removal has found its way into the medical text books[1]. It was during the Middle Ages that forceps for removing nasal polyps was developed which are very similar to the ones used in these modern days. However, Gabriel Fallopius (1523-1562) is credited with developing the wire snare for removal of nasal polyps. Billorth (1864) described nasal polyps as dynamatous (large like dinosaurs) swelling and considered them to be neoplastic, but Zuckerlkandl considered them to be an inflammatory condition, Virchow in 1863 referred polyps as myxomata. Even Lack in 1900 supported the theory that polyps are not neoplastic but are inflammatory in origin[2]. Categorization of nasal polyps into different groups based on the site of origin was started by Killian (1906). He was the first to describe it as 'Antrochoanal polyp". In later came to be known as Killian's polyp. Subsequently, Fairbanks classified them into two groups as antrochoanal and multiple ethmoidal polyps. Further Berdal (1959), was the first to introduce the practice of differentiating between benign and neoplastic conditions based on the histopathological classification.[3] Samter (1968) further established a variety of other systemic disorders associated with polyps. He described a sub group of patients with aspirin hypersensitivity, asthma and nasal polyps which was termed as "Samter's Triad."[4].

Per Larson and Micro-Tos by cadaveric studies evaluated the origin of nasal polyps. They confirmed that nasal polyps originated from nasal mucosa, and they are invariably related to sinus ostia[4]. The presenting symptomatology of all nasal masses is similar and with advanced investigative techniques like CT and MRI, a presumptive diagnosis can often be made. However, a careful histopathological examination with immunochemistry is necessary to decide the nature of the mass in the nose.[5] The most common benign mass in the nose is the nasal polyp. Nasal polyps are a medically recognized condition since the time of ancient Egyptians. Interestingly, this condition affects only man an chimpanzee. In fact nasal polyps are not true neoplasms and they must be distinguished from more serious pathology by histopathological examination.[6] The striking feature of polyps is the loose structure of the stroma under low power. The delicate connective tissue cells and the fibrils are separated by clear fluid, more pronounced at the surface and decreases towards the periostial portions. The blood vesels are widely separated by the edema and are further accentuated by cellular exudates that surround them. The surface epithelium is usually of respiratory type and consists of pseudo stratified ciliated columnar epithelium and goblet cell.[7] The polyp stroma is markedly edematous containing a mixed chronic inflammatory cell infiltrate and is predominantly composed of eosinophils, plasma cells and lymphocytes. The stroma contains fibroblasts and small to medium sized blood vessels.[8] Polyps are grouped into eosinophilic and inflammatory types depending on the predominance of eosinophils. Histological study revealed the predominance of eosinophils. Hence allergy is suspected to be the etiological factor in polyps. Chandra and Abrol (1674) as quoted by Tondon have found a significant relationship between the eosinophilic infiltration of nasal polyp as well as local IgE production[9]. Bone destruction and osteoporosis may accompany polypoidal changes in the mucosa. These changes are particularly demonstrable in the middle turbinate. The pressure atrophy of bony framework of middle turbinate resulting from polyposis formerly referred to as "Necrotizing Ethmoiditis."[10].

MATERIAL AND METHODS

Study group included 30 patients presenting with clinical features of nasal polyp, who were treated at dept. of otorhinolaryngology, Teaching and General Hospital attached to Medical College during study period.

Inclusion Criteria

Patients representing with clinical features of nasal polyp, of all age groups and both sexes, including recurrence cases.

Exclusion Criteria

Patients presenting with clinical features other than nasal polyp.

Method of collection of Data

Patients treated between study periods were subjected to a comprehensive history and clinical evaluation and histopathological examination as per the proforma designed for this study. Records of patients treated between study period were retrieved from medical records section of Medical College to get the required data. The histopathological slides and blocks were retrieved from the Department of Pathology and were reviewed by the Pathologist. Data obtained form these records was complied to meet the requirement of this study.

RESULTS

Table 1: Age and Sex wise distribution of samples or cases

Age in years	Male		Female		Total	
	No.	%	No.	%	No.	%
≤ 10	1	5.0	0	0.0	1	3.33
11-20	3	15.0	2	20.0	5	16.67
21-30	5	25.0	5	50.0	10	33.33
31-40	4	20.0	2	20.0	6	20.0
41-50	3	15.0	0	0.0	3	10.0
51-60	4	20.0	1	10.0	5	16.67
Total	**20**	**100.0**	**10**	**100.0**	**30**	**100.0**

Mean age and SD of Males is 33.75 ± 15.50 Mean age and SD of females is 30.90 ± 11.68 For all cases mean age and SD is 32.80 ± 12.64 $t = 0.56$, $p > 0.05$ NON SIGNIFICANT There is no significant difference of age among males and females. In our study, out of 30 patients, with age ranging from 9 years to 58 years, maximum age incidence was in between 21-30 years where as least age incidence was <10 years of age.

Table 2: Symptoms of Nasal Polyps

Symptoms	Number of patients	Percentage
Nasal Obstruction	28	93.33
Nasal discharge	14	46.67
Headache	15	50.00
Smell Disturbances	10	33.33
Post nasal discharge	2	6.67
Epistaxis	2	6.67
Sneezing	16	53.33
Rhinolaliaclausa	7	23.33

The most common symptom was nasal obstruction found in 28 patients (93.3%), sneezing was next complaint present in 16 patients (53.33%) followed by headache in 15 patients (50%) and nasal discharge in 14 (46.6%), smell disturbances in 10 (33.3%), Rhinolalia clause in 7 patients (23.33%) of Antrochoanal polyp, post natal drip and epistaxis in 2 patients each (6.6%).

Table 3: Clinical Findings in cases of nasal polyps

Type	Laterality			Numbers		Post nasal examination	
	Right	Lift	B/l	Single	Multiple	Present	Absent
Eth. Polyp	0	2 (20%)	8 (80%)	0	10 (100%)	0	10 (100%)
A-c Polyp	8 (57.14%)	6 (42.8%)	0 (0.0%)	14 (100 %)	0 (0.0%)	7 (50%)	7 (50%)

According to the clinical findings 80% of ethmoidal polyps presented bilaterally, where asantrochoanal polyps had 100% unilateral presentation with predominance of right side (57%). 100% of ethmoidal polyps were multiple in number, while antrochoanal polyps presented as solitary poypoidal mass in all cases (100%). 50% of antrochoanal polyps had posterior extension.

DISCUSSION

In our sample, antrochaoanal polyps (46.6%) were more common than Ethmoidal polyps (33.3%). This percentage is significantly higher compared to the incidence of 4 to 6 % report4ed by others (Basu K.S. *et al*.).

Table 4: Age distribution in Nasal cases in different studies

Age	Drake Lee[11] n-200		Majumdar[12] n=115		Present study n=30	
	No.	%age	No.	%age	No.	%age
1-10	-	0	-	0	1	3.33
11-20	7	3.5	2	1.7	5	16.6
21-30	36	18	8	7	10	33.3
31-40	50	25	13	11.3	6	20
41-50	31	15.5	27	23.5	3	10
51-60	43	21.5	34	29.6	5	16.6

In our study the age incidence of 30 patients with nasal polyps, ranged between 9 to 50 years. Out of them the majority belonged to 21 to 30 years of age (33%). This is very similar to the study of Dark Lee having (43%) in 21 to 40 years age groups.

Table 5: Comparative study of male to female ratio

Author	Male	%age	Female	%age	Ratio
Drake Lee[11]	151	7.5	49	24.5	3:1
Majumdar[12]	82	71.3	33	28.7	2.4:1
Our Study	20	66.6	10	33.3	2:1

In our study of 30 cases, males dominated with 20 cases (66.6%). The male to female ratio was 2:1. Out study is nearly to par with the other studies with respect to male: female ratio.

Table 6: Showing comparison of symptoms in ethmoidal polyp cases

Symptoms	Our study	Drake Lee[11]
Sneezing	40%	60%
Nasal obstruction	80%	98%
Rhinorrhoea	50%	60%
Headache	60%	72%
Post nasal discharge	10%	60%
Smell disturbance	40%	60%

Ethmoidal polyp presented mainly with nasal obstruction 80% as the main symptom. Other symptoms included sneezing (40%), rhinirrhoea (50%), headache (60%), postnasal discharge (10%) and smell disturbance in (40%). This finding is rather close to the findings arrived by Drake Lee which shows nasal obstruction in 98% headache in 72%, rhinorrhoea in 60%, smell disturbance in 60%, post nasal discharge in 60% cases, our study shows nasal obstruction (80%) as the main symptom in our study.

Table 7: Showing comparison of symptoms in antrochoanal polyp cases

Symptoms	In our study	Drake Lee[11]
Nasal Obstruction	100%	98%
Rhinorrhoea	42%	85%
Post nasal discharge	7%	70%

Antrochoanal polyp had symptoms of unilateral nasal obstruction (100%) and rhinorrhoea 42% followed by post nasal discharge (7%) which also closely resemble the Drake Lee[24] study. When symptoms between ethmoidal and ntrochoanal polyp were compared, statistically significant difference could be found in the proportion of allergic symptoms (sneezing and rhinorrhoea) which was seen in ethmoidal polyp cases. This finding is not in agreement to that of Kmath P.M. *et al*., who stated that antrochoanal polyp does not differ significantly in their presentation from ethmoidalpoyp except in having unilateral nasal obstruction.

CONCLUSION

From our study, it is evident that the polyps in the nasal cavity and the paranasal sinuses from a wide spectrum of lesions ranging from unilateral single large polyp to multiple small ethmoidpolypi with various histopathologic findings which are affect different age groups.

REFERENCES

1. Drake-Lee AB. Nasal polyps In: Mackay IS, Bull TR editors. Scott-Brown's tolaryngology 9thed, Vol. 4, Oxford: Butterworth Heinemann, 1997; 11:1-16.
2. Vancil ME. A historical survey of treatment of nasal polyposis.Llaryngoscope 1969; 79:435-45.
3. Chen JM. Antrochoanal polyps.A 10 years retrospective study in paediatric population with the review of literature.J Otolaryngol 1989; 18:168-72.
4. Arson P, Tos M. Origin of Nasal polyps. Laryngoscope 1991; 101-305-12.
5. Chessman AD, Jani P. Cysts, granulomas and tumours of Jaws, nose and sinuses. In: Hibbert J editor. Scott-

Brown's Otoaryngology 6th edition, Vol 5. Oxfort: Butterworth Heinemann, 1997; 23:1-40.
6. Lund VJ. Diagnostic and treatment of nasal polyps. British Med J 1995; 311(25): 1411-13.
7. Drake Lee AB, Braker THW, Hurley TK. Nasal polyups-fine structures of mast cells. J LaryngolOtol 1684; 98:285-92.
8. Basu KS, Bandyopadhyay SN, Bora H. Bilateral antrochoanal polyp. J LaryngolOtol 2001; 115:561-62.
9. Tondon PL, Gulati J, Mehta N. Histological study of polypoidal lesions in nasal cavity. Indian J Otolaryngol Head Neck Surg; 23(1): 3-11.
10. Winstock DP. Benign nasal polyps causing bone destruction in the nasal cavity. Laryngoscope 1978; 88(4): 675-79.
11. Drake-Lee AB. Cinical profile and recurrence of nasal polyps. J LaryngolOtol 1984; 98:783-93.
12. Majumdar B, Bull PD. The incidence and bacteriology of maxxilary sinusitis in nasal polyposis.J. LaryngolOtol 1682; 96:937-41.

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