

Original Research Article

Clinical profile of cases with sino-nasal polyposis at a tertiary care hospital at North Karnataka: a cross-sectional study

Shruthi Patil V.¹, Geeta^{2*}

Department of Otorhinolaryngology, ¹Vijayanagara Institute of Medical Sciences, Bellary, ²Karwar Institute of Medical Sciences, Karwar, Karnataka, India

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***Correspondence:**

Dr. Geeta,

E-mail: geetakurleent@gmail.com

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ABSTRACT

Background: Nasal polyps are defined as pearly white, prolapsed, pedunculated oedematous Sino-nasal mucosa. They are unique in their position and their composition. Many hypotheses concerning its pathogenesis have been proposed. But till now there is no clear evidence for any single cause. This study was taken-up to study the clinical profile of cases with sino-nasal polyps.

Methods: Cross-sectional descriptive study was conducted in the Department of Otolaryngology at Vijayanagara Institution of Medical Sciences, Bellary, between January 2016 to April 2016 involving 60 patients fulfilling inclusion and exclusion criteria. Pre-tested and edited proforma was used to collect the data.

Results: Out of 60 participants, 63.4% were males, mean age was 29.5 years. Ethmoidal polyp (63.4%) was the most common polyp followed by antrochoanal polyp (33.4%). Ethmoidal polyp was most commonly observed 31-40 years age while antrochoanal polyp was observed in 11-20 years age. Ethmoidal polyp and antrochoanal polyp were observed more commonly in males and females respectively. The most common presenting symptoms were nasal obstruction and nasal discharge.

Conclusions: Ethmoidal polyps are the most commonly observed sino-nasal polyps followed by antrochoanal polyp. Ethmoidal polyp was more commonly observed in adult age group while antrochoanal polyp was observed in children. The most common presenting symptoms were nasal obstruction and nasal discharge.

Keywords: Sino-nasal polyp, Ethmoidal polyp, Antrochoanal polyp

INTRODUCTION

Polyps are common cause of nasal obstruction in adults with a prevalence of about 4% in the general population.¹ Nasal polyps are defined as pearly white, painless, prolapsed pedunculated parts of the nasal mucosa. These are unique in position and composition.² On examination, polyps appear as pale bags of edematous tissue arising commonly from middle meatus and prolapsing into the nasal cavity.³

Nasal polyps occlude the sinuses and lead to symptomatic sinusitis, pulmonary parameters often worsen and

subsequently improve after successful treatment of sinus disease. Therapy of nasal polyps is one of the major challenges for both conservative and surgical approaches including endoscopic sinus surgery. Nasal polyps have tendency to recur as long as underlying disease cannot be eradicated.⁴

The understanding of pathophysiology and the management of nasal polyposis has long been a concern for the treating clinician. This study was conducted to understand the clinical profile of sino-nasal polyposis in a tertiary care hospital of North Karnataka.

METHODS

Study design

A cross-sectional descriptive study.

Study location

Department of Otolaryngology at Vijayanagara Institution of Medical Sciences, Bellary, Karnataka.

Study population

During the study period (January 2016 to April 2016), all those patients who presented to Otolaryngology OPD with history suggestive of Sino-nasal polyp and who fulfilled our inclusion and exclusion criteria were enrolled in the study.

Study duration

January 2016 to April 2016.

Inclusion criteria

Inclusion criteria were patients of all age and gender; patients presenting with history of nasal obstruction due to sino-nasal polyposis; patients/guardians who gave written consent to participate in the study.

Exclusion criteria

Exclusion criteria were patients presenting with congenital mass; psychiatric patients; patients with tumours of benign and malignant origin.

Data collection

All those patients who presented to Otolaryngology OPD with history suggestive of Sino-nasal polyp and who fulfilled our inclusion and exclusion criteria were enrolled in the study. All the patients were thoroughly evaluated with detail history & clinical examination as per standard protocols. The patients/guardians were explained about the study in their understandable language and a written consent was obtained. The data was collected by using a pre-tested and edited proforma.

Statistical analysis

The data collected was entered in an excel sheet and the results were analysed using SPSS statistical software. Frequency, percentage & mean were used to present the data.

Ethical clearance

Ethical clearance obtained from the Institutional Ethical Committee of Vijayanagara Institution of Medical Sciences, Bellary, Karnataka.

RESULTS

In our study, out 60 participants, majority of them were of below 40 years of age (78.4%). 40% (24) of them were of below 20 years of age Mean age of the participants was 29.5 years (Table 1).

The most common type of sino-nasal polyp observed was ethmoidal polyp (63.4%) followed by antrochoanal polyp (33.4%), sphenoidal polyp (1.6%) and frontal polyp (1.6%) (Table 2).

Table 1: Age-wise distribution of cases.

Age group (years)	Number	Percentage (%)	Mean age (years)
≤10	6	10	29.5 yrs
11-20	18	30	
21-30	12	20	
31-40	11	18.4	
41-50	7	11.6	
51-60	5	8.4	
>60	1	1.6	
Total	60	100.0	

Table 2: Distribution of cases according to type of sino-nasal polyp.

Site of origin of polyp	Number	Percentage (%)
Ethmoidal polyp	38	63.4
Antrochoanal polyp	20	33.4
Sphenoidal polyp	1	1.6
Frontal polyp	1	1.6
Total	60	100

Table 3: Age-wise distribution of different type of polyps.

Age group (years)	Ethmoidal polyp N (%)	Antrochoanal polyp N (%)	Sphenoidal polyp N (%)	Frontal polyp N (%)
≤10	2 (5.3)	4 (20)	-	-
11-20	6 (15.8)	12 (60)	-	-
21-30	8 (21)	3 (15)	1 (100)	-
31-40	9 (23.7)	1 (5)	-	1 (100)
41-50	7 (18.4)	-	-	-
51-60	5 (13.2)	-	-	-
>60	1 (2.6)	-	-	-
Total	38 (100)	20 (100)	1 (100)	1 (100)

Table 4: Distribution of cases according to gender.

Gender	Ethmoidal polyp N (%)	Antrochoanal polyp N (%)	Sphenoidal polyp N (%)	Frontal polyp N (%)	Total N (%)
Males	28 (73.6)	9 (45)	1 (100)	-	38 (63.4)
Females	10 (26.4)	11 (55)	-	1 (100)	22 (36.6)
Total	38 (100)	20 (100)	1 (100)	1 (100)	60 (100)

Ethmoidal polyp was observed in all the age groups, but majority of them (23.7%) was observed in the age group of 31-40 years. All the 20 antrochoanal polyps were observed in the age group of less than 40 yrs, but majority of them (60%) were observed in the age group of 11-20 years (Table 3).

Among all the polyps, 63.4% were seen in males while 36.6% was observed in females showing a male preponderance. Out of 38 ethmoidal polyps, 28 (73.6%) were observed in males and 10 (26.5%) were observed in females showing a male preponderance. Out of 20 antrochoanal polyps, 11 (55%) were observed in females and 9 (45%) in males showing a slight female preponderance (Table 4).

Table 5: Distribution of cases by presenting symptoms.

Symptoms	Ethmoidal polyp N (%)	Antrochoanal polyp N (%)
Nasal obstruction	38 (100)	20 (100)
Nasal discharge	38 (100)	20 (100)
Headache/facial pain	27 (71)	5 (25)
Hyposmia	26 (68.4)	5 (25)
Mouth breathing	20 (52.6)	17 (85)
Hyponasal voice	17 (44.7)	15 (75)
Post nasal drip	14 (36.8)	17 (85)
Excessive sneezing	17 (44.7)	5 (25)
Bleeding/epistaxis	3 (7.9)	4 (20)
Total	38 (100)	20 (100)

Table 6: Distribution of cases by duration of symptoms.

Duration of symptoms (months)	Ethmoidal polyp N (%)	Antrochoanal polyp N (%)
1-3	3 (7.9)	0 (0)
4-6	18 (47.3)	7 (35)
7-9	9 (23.7)	6 (30)
10-12	7 (18.5)	3 (15)
>12	1 (2.6)	4 (20)
Total	38 (100)	20 (100)

In our study, the most common presenting symptoms observed in ethmoidal polyps were nasal obstruction (100%) and nasal discharge (100%), followed by headache/facial pain (71%), hyposmia (68.4%).

Bleeding/epistaxis was reported by 7.9% of cases. The most common presenting symptoms observed in antrochoanal polyps were nasal obstruction (100%) & nasal discharge (100%), followed by mouth breathing (85%), post nasal drip (85%), hyponasal voice (75%). Bleeding/epistaxis was reported by 20% of cases (Table 5).

Majority of ethmoidal polyp cases (47.3%) and antrochoanal polyps (35%) had presenting symptoms for duration of 4–6 months (Table 6).

DISCUSSION

Our study showed that 78.33% of polyps were observed within 40 years of age. Similar observations were made by Lathi et al showing 87.5% of non-neoplastic sino-nasal masses presenting within age of 40 years.¹ This shows that non-neoplastic sino-nasal masses are most commonly seen among young and middle age group population.

In our study 63.4% of polyps were seen in males while 36.6% were observed in females showing a male to female ratio of 1.73:1. Similarly in a study done by Zafar et al among non-neo-plastic lesions of nasal cavity and paranasal sinuses male to female ratio of 1.7:1 was observed.⁵ While in study done by Lathi et al male to female ratio of 1.5:1 was observed.¹ Study done by Newton et al showed male to female ration of 2:1 which was higher compared to other studies.⁴ All of which showed a male preponderance for sino-nasal polyps and sino-nasal masses similar to our study.

In our study, most common type of sino-nasal polyp observed was ethmoidal polyp (63.4%) followed by antrochoanal polyp (33.4%), sphenoidal polyp (1.6%) and frontal polyp (1.6%) similar observations were made in study conducted by Rawat et al among the 142 sino-nasal polyps where 65.5% were Ethmoidal polyp while 34.5% were antrochoanal polyp.⁶ These observations shows that Ethmoidal polps are the most commonly observed sino-nasal polyps.

In our study 80% of antrochoanal polyp was observed within 20 years of age, similar observation was made in study Freitas et al where 68.75% of antrochoanal polyps were observed within 20 years of age.⁷ This shows that antrochoanal polyps are seen in young age

The most common presenting symptoms of sino-nasal polyps observed in our study are nasal obstruction

(100%) and nasal discharge (100%), mouth breathing (85%), post nasal drip (85%), followed by headache/facial pain (71%), hyposmia (68.4%). Similarly in study conducted by Lathi et al nasal obstruction (97.3%), rhinorrhoea (49.1%) hyposmia (31.25%) were the common presenting symptoms.¹ In a study conducted by Sharma et al the most common observation among the masses of nasal cavity, paranasal sinuses and nasopharynx were nasal polyposis (86%) and the most common presentation was nasal obstruction, nasal discharge & post-nasal discharge.⁸

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Ethical approval: The study was approved by the Institutional Ethics Committee of Vijayanagara Institution of Medical Sciences, Bellary, Karnataka

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