

Original Research Article


Clinical Study of Nasal polyps

Srikanth Myla^{1*}, A. Roja Rani²

¹Professor, ²Post Graduate

Department of ENT, S.V.S Medical College, Mahabubnagar, Telangana, India

*Corresponding author email: myla.srikanth@gmail.com

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Abstract

Background: Nasal polyps are benign lesions arising from the mucosa of the paranasal sinuses (or) from the mucosa of nasal cavity. Nasal polyps are the subgroup of chronic rhino sinusitis, chronic rhino sinusitis with polyps. The exact etiology and pathology of nasal polyps remains unclear but bacteria, fungi, allergy, super antigens play a prominent Role in pathophysiology of nasal polyps. Elevated levels of histamine and IgE found around polyps and mast cells and eosinophilia found within polyps suggesting that inflammation is a major factor in polyp formation. Approximately 80% of nasal polyps are characterized by a robust T helper – 2 response, eosinophilic infiltration decreased T regulatory function, abundance of IL - 5 cytokine.

Materials and methods: 50 cases that came as outpatient in ENT Department of SVS Medical College and Hospital, Mahabubnagar were included in this study with investigations of nasal endoscopy and CT PNS.

Results: About 60% patients of males mostly at the age group of 30-40 years were affected more with nasal polyps. About 40% patients came with complaints of nasal obstruction 30% patients with nasal discharge. 70% patients associated with fungal sinusitis.

Conclusion: Nasal polyps are results of severe inflammation of nose and PNS. Mostly affects men (60%) with mean age group of 39 years. Most of the patients presented with nasal obstruction followed by nasal discharge. They mostly associated with fungal sinusitis and asthma.

Key words

Nasal polyp, Nasal obstruction, Nasal discharge, Fungal sinusitis, Allergic rhinitis.

Introduction

Nasal polyps are benign lesions arising from the mucosa of the paranasal sinuses (or) from the mucosa of nasal cavity. Nasal polyps are the

subgroup of chronic rhinosinusitis, chronic rhinosinusitis with polyps [1]. The exact etiology and pathology of nasal polyps remains unclear but bacteria, fungi, allergy, super antigens play a

prominent role in pathophysiology of nasal polyyps.

Elevated levels of histamine and IgE found around polyyps [2] and mast cells and eosinophilia found within polyyps suggesting that inflammation is a major factor in polyp formation.

Nasal polyyps represent the end stage local manifestations of chronic inflammatory disease of sinonasal tract associated with nasal blockage or obstruction/ congestion/ nasal discharge +/- facial pain/ pressure, reduction (or) loss of smell.

Polyp refers to hypertrophied edematous prolapsed nasal (or) sinus mucosa due to allergy, Inflammation, infection. Most commonly found in middle meatus, ethmoid sinuses.

Many etiological factors responsible for development of nasal polyposis are allergy, infections (viral, bacterial, fungal) and environment pollution as all possible triggering factors.

Nasal polyyps associated with systemic diseases such as asthma [3, 4] asprin exacerbated respiratory disease/ samter's triad [5], allergic fungal rhinosinusitis [6]. CT PNS [7], nasal endoscopy are useful in diagnosis of nasal polyp.

Management can be both medical and surgical. Topical steroids are drug of choice if the patients not responding to medical therapy. FESS is used to perform a polypectomy [3, 8].

Elevated levels of IgE and positive skin tests to inhalant allergies have been determined in the majority of patients with nasal polyyps [3, 9].

Medical treatment consists mainly of topical and systemic corticosteroids which are affect eosinophil function directly by reducing both eosinophil viability and activation and indirectly by reducing secretion of chemotactic cytokines by nasal mucosa and polyp epithelial cells [10].

Materials and methods

Source of data: 50 cases that came as outpatient in ENT Department of SVS Medical College and Hospital, Mahabubnagar in durations of two years i.e. April 2019 to April 2021.

Investigations: Nasal Endoscopy, CT PNS coronal cuts, serum IgE, Serum eosinophils.

Inclusion criteria

- Both males and females with age group of 20-60 years.
- Patients with clinical symptoms of nasal obstruction, watery rhinorrhea, post nasal drip, chronic mouth breathing, obstructive sleep hyposmia/ anosmia.
- Patients have nasal polyp associated with asthma, allergic rhinitis.

Exclusion criteria

- Both male and female with age below 20 above 60 years.
- Immunocompromized Individuals.

Results

Nasal polyyps affected middle aged men (60%) more frequent than women. Mean age group was 39 years. Most frequent symptom was nasal obstruction (40%) followed by rhinorrhea (30%). Asthma was found in (15-20%) patients with nasal polyyps. Fungal sinusitis was found (70%) patients with nasal polyyps. Allergic rhinitis was found in (10%) patients with nasal polyyps. AERD (Samter's triad) was found in (4%) patients with nasal polyyps (**Table – 1 to 7, Photo – 1 to 4**).

Table – 1: Gender distribution.

Gender	No of patients	%
Male	30	60%
Female	20	40%
Total	50	100%

Discussion

In our study middle aged men were more affected than females at a ratio of 3:2.

Table – 2: Age distribution.

Age in years	No of patients
20-30	4
30-40	30
40-50	10
50-60	6

Table – 3: Symptoms.

Symptoms	No of patients	%
Nasal obstruction	20	40%
Nasal Discharge	15	30%
Impaired sense of Smell (Hyposmia/ Anosmia)	6	12%
Post nasal drip	5	10%
Headache	4	8%

Table – 4: Endoscopic findings.

Endoscopic findings	No of patients	%
DNS	10	20%
Nasal polyps	50	100%
Allergic mucin	20	40%
Mucopurulent discharge	15	30%

Table – 5: CT findings.

CT findings	No of patients	%
Ethmoidal Sinus Opacity	15	20%
Pan Sinusitis	5	10%
Heterogeneity of sinuses	20	40%
Maxillary Sinus Opacity	10	30%

Table – 6: Associated diseases.

Diseases	No of patients	%
Asthma	8	16%
Fungal sinusitis	35	70%
Allergic rhinitis	5	10%
AERD (Samter’s triad)	2	4%

In study of Bettiga, et al. men (44.66%) were most commonly affected with polyps [11].

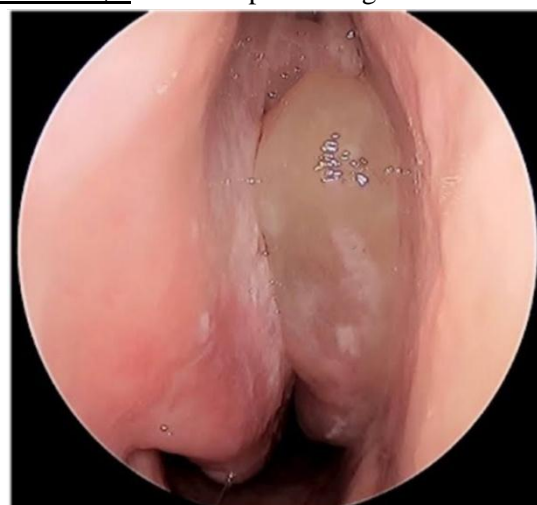
In our study, it was found that age group 30 to 40 years were affected more and mean age group is 39 years, correlated with Taimoor Latif, et al.

[12] study. In this study, predominant age group 31-40 and mean age group -31 years.

Table – 7: Complications.

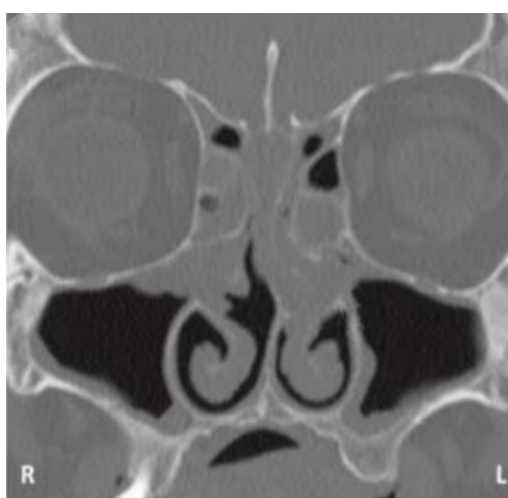
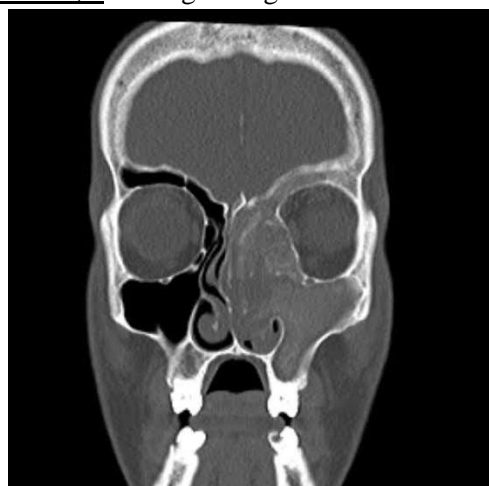
Complications	No of patients	%
Chronic/Frequent Sinus infections	40	80%
Obstructive sleep apnea	5	10%
Intra orbital	3	5%
Intra cranial	2	1%

Photo – 1, 2: Endoscopic findings.



In our study the, M/C complaint of patients with nasal polyps was nasal obstruction F/B Nasal discharge or rhinorrhea. In Jahorami, et al. study where 81% of their study had nasal obstruction and 37.7% had rhinorrhoea [13].

Photo – 3, 4: Allergic fungal sinusitis.



In our study, on endoscopy, nasal polyps were (100%), allergic mucin – 40% and mucopurulent discharge 30%. It is correlated with Lund Kennedy Endoscopic staging system [14].

In our study of CT para nasal sinus findings, ethmoidal opacities were more than maxillary opacity. Ullah, et al. in their study on surgical management of massive nasal polyps, mentioned that CT scans showed bilateral involvement of ethmoids and nasal cavities in 90% of cases, while orbital involvement was noted in 10% of cases [15].

In our study, patients with nasal polyposis often present with associated fungal sinusitis correlated with the study of T. Santhietal [16]. In this 60 study population, 35 cases had fungal element.

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