

A study to observe the prevalence of nasal polyposis among patients with chronic recurrent rhinosinusitis

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Abstract

Background: Nasal polyposis is a prevalent condition that is said to affect between 1 and 4% of the general population. The aetiology of nasal polyps is largely unknown and has long been a topic of debate. Although historically have believed polyps to be a manifestation of allergy.

Objective: To find out the prevalence of nasal polyposis among patients with chronic recurrent rhinosinusitis.

Materials and Methods: This is a Cross-sectional study, was conducted in MYH a tertiary care hospital, Indore, M.P. A total of 338 patients presenting with symptoms of chronic rhino sinusitis and giving consent were recruited for the study. All patients with chronic recurrent rhinosinusitis were included in the study.

Result: The mean age of participants was 34.5-9 years. There was a preponderance of male gender among all the patients. The most common symptom was nasal discharge, followed by nasal obstruction, followed by headache, among all the participants, 46.1%.

Conclusion: From our study, we conclude that the chronic recurrent rhinosinusitis patient has a chance of developing a nasal polyp if left untreated.

Keywords: Rhinosinusitis, nasal polyps, nasal discharge

Introduction

Mucosal lesions of the nasal or paranasal sinuses are called nasal polyp. Which can be a result from a response to inflammatory or infectious stimuli? They seems as smooth, round, semi-translucent masses that are most commonly found in the middle meatus and ethmoid sinuses and affect 1% to 4% of the

Population. In gender Males are predominantly affected as compared to females and in age group adults cases are more than children. If polyp occurs in childhood, disease like mucociliary and immunodeficiency must be ruled out, as several research suggest with cystic fibrosis have a prevalence of nasal polyposis is between 6% and 48%.^[1] Nasal polyposis patient may present with complaints of congestion, nasal obstruction, hyposmia, rhinorrhoea, epistaxis, postnasal drip, headaches, and snoring. Although most of time nasal polyps present bilaterally but they can be unilateral.

Chronic rhinosinusitis is an inflammatory disease of the nasal mucosa and paranasal sinuses that is associated with significant morbidity and quality of life related with health.^[2-4] The Pathophysiology of CR^[5] is associated with local (Sinonasal) and systemic (lower airway) inflammation, with persistent symptoms of nasal congestion, rhinorrhoea, and loss of smell that have a significant impact on HRQoL. Most patients with CRS with Nasal polyp show evidence of type 2 airway inflammation, and these patients have the highest disease burden.^[6-9] As a result of the shared type 2 inflammatory pathway implicated in several coexisting diseases, patients with CRSwNP often have co morbid asthma and/or non-steroidal anti-inflammatory drug-exacerbated respiratory disease (NSAID-ERD).

The disease burden with significantly lower physical and mental HRQoL than population norms is particularly high in CRSwNP. This is particularly in patients with co morbid asthma and/or NSAID-ERD^[10] and in patients who need repeated treatment with corticosteroids and/or Sinonasal surgeries to alleviate its uncontrolled symptoms. The impact on HRQoL is comparable with other chronic diseases such as chronic obstructive pulmonary disease (COPD), asthma, and diabetes.^[11, 12]

CRSwNP can be difficult to treat in patients with the highest burden. The current treatment paradigm involves corticosteroids and/or Sinonasal surgery, but these options may be associated with recurrence of nasal polyps, and patients may require revision surgery. Additionally, there exist non-negligible risks associated with both repeated steroid use and surgery^[13, 14]. A qualitative study reported that patients can become frustrated with the management of their disease and often feel that the impact on their quality of life is not fully recognized.^[15]

For this review, a targeted search of the literature was performed to examine the burden of disease for CRSwNP. Although previous literature reviews have focused on specific aspects of unmet need, this review evaluates a broader set of outcomes, with a focus on burden: the clinical, humanistic, and economic aspects of the disease, and the impact on HRQoL of the patients. We searched MEDLINE (via PubMed) and Embase for articles using search terms including “nasal polyposis,” “rhinosinusitis,” “chronic rhinosinusitis” and “chronic rhinosinusitis with nasal polyps,” and articles were chosen for inclusion based on their relevance to the topic. We also referenced expert position papers. In this targeted literature review, we highlight the epidemiology and pathology of CRSwNP, examine the clinical, humanistic, and economic burden of the disease, and close with a review of the current treatment paradigm and its limitations.

Materials and Methods

Our study is conducted in tertiary care hospital of Central India. Selection of 338 patients of chronic rhinosinusitis were done by purposive sampling method and on the basis of consent given to be part of study, and statistical test will be applied wherever is required for analysis.

Result

Present study was conducted in the ENT department of tertiary care hospital of central India, where patient of chronic rhinosinusitis were purposively selected, total 338 patient were participant of study gender distribution was 56.25% were male and 43.75% were female, most of the participant were belong to all age group most of participant were belong to age of 30-40 years followed by, 20-30 years, the mean age of the participant were 34.59±9 years. The most common symptoms are Nasal discharge among the 96.15% of participants followed by nasal obstruction among 88.75% participant, followed by post nasal

Drip among the 52.66%, sneezing observed in 50%, nasal polyp observed among 46.15% cases, headache in 44.97% cases while 16.2% presented with ear discharge and only 8.8%

Table 1: Clinical Symptoms of the Patients

Symptoms	No of patients	Percentage
Nasal discharge	325	96.15385
Nasal obstruction	300	88.7574
Headache	152	44.97041
Sneezing	169	50
Nasal mass/polyp	156	46.15385
Epistaxis	30	8.87574
Ear (discharge/heaviness)	55	16.27219
Post nasal drip	178	52.66272

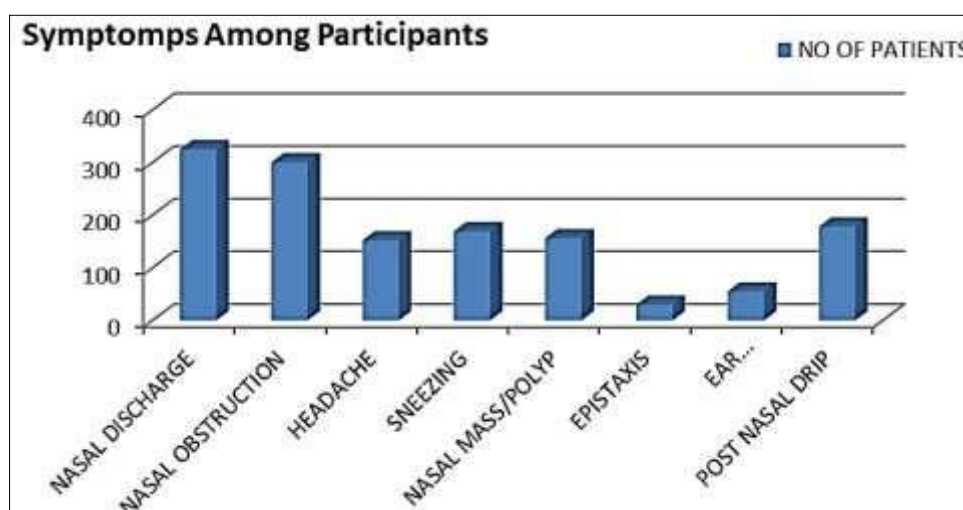


Fig 1: Symptoms of among participants

Nasal polyp observed in the 156 cases among this 60 were females and 96 were males most of them were belong to age group of 30-40 years. 103 were having bilateral polyp while 53 were having unilateral.

Table 2: Gender Distribution

Particulars	No. of participants	Percentage
Male	96	61.54
Female	60	38.46

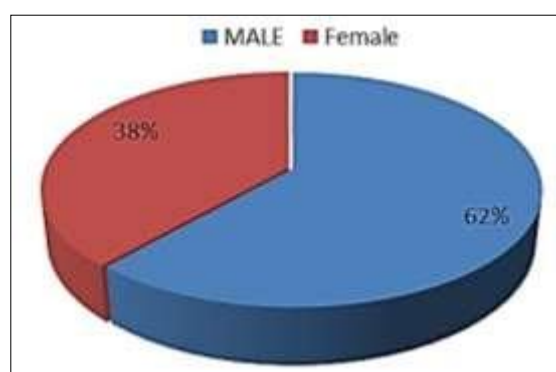
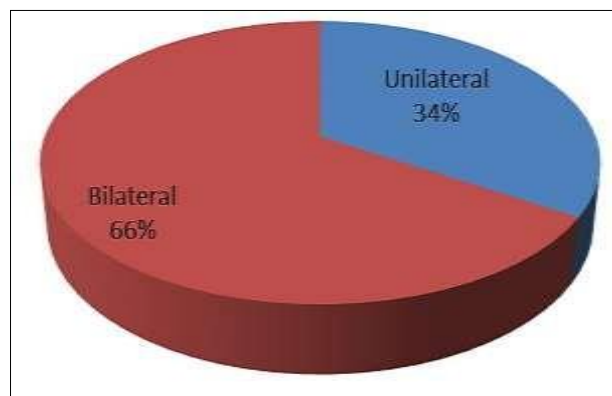


Fig 2: Gender Distribution

Table 3: Type of Polyp

Particulars	No. of participants	Percentage
Antrochoanal polyp	53	33.97
ethmoidal polyps	103	66.03

**Fig 3:** Type of polyp

Discussion

Nasal polyposis is frequently observed with chronic rhinosinusitis. Present study 156 cases of all 338 cases of chronic rhinosinusitis were having Nasal Polyposis. Which is 46.15% of all cases which similar to study conducted by Staikūniene J in year 2008 ^[16]. Where the nasal polyp is present in 44 cases of chronic rhinosinusitis. In present study most of cases were belong to age group of 30-40 years age group. Mustafa Golam *et al.* ^[17] in year 2011 in his study total 60 cases in which maximum (44 cases) 73.33% of patients were in age group of 20-40 years, the male patients were (42 cases)70% and female patients were (18 cases) 30%. The M: F ratio was 2.3:1. They also found that, nasal discharge 50%, nasal obstruction 70%, headache /facial pain 65%, post nasal drip 33%, sneezing 25%, and the chief complaint in his study was nasal obstruction followed by headache while in our study the chief complaint is nasal discharge followed by nasal obstruction. we also in our study found that the most common symptoms was nasal discharge 96.25% and next were nasal obstruction 88.75%, post nasal discharge 52.50%, followed by sneezing 50%, nasal mass 46.25%, headache 45%, ear problem 16.25% and epistaxis 8.75%. Kennedy *et al.* in year 1992 also show the similar finding in his study, nasal discharge, headache and nasal obstruction or congestion as the most frequent symptoms in patients with chronic rhinosinusitis ^[18]. Hemant Chopra in year 2008 noted in his study of 50 cases of nasal polyp, nasal endoscopy finding were, most of the patients 76% had ethmoid polyp. 8% were suspected to have an antochoanal polyp and 14% presented with a non-specific polypoidal nasal mass ^[19]. In our study total (156 cases) 46.25% cases were seen with nasal polyps out of which 66.03% ethmoidal polyps, and Antochoanal polyp cases 33.97%, of all cases of nasal polypi.

Conclusion

Recent progress in understanding pathogenesis of upper airway tract disease identified inflammation play a key role in chronic rhinosinusitis and development of polyp. Prompt early diagnosis and proper management of rhinosinusitis may prevent the development of nasal polyposis.

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