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A Cross-Sectional Study on Demographic and Clinical Profile of Chronic Rhinosinusitis (CRS) Patients in a Tertiary Care Hospital

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ABSTRACT

Objective: To study the socio-demographic and clinical characteristics of chronic rhinosinusitis (CRS) patients in a tertiary care hospital.
Methods: This was a cross sectional observational study conducted in a tertiary care hospital. All the patients with clinical findings of CRS referred from ENT Department for CT PNS constituted the study population. All the patients were submitted to detailed clinical examination, routine investigation & subsequently submitted for CT scan of PNS.
Results: About one third of patients were between 20-30 years (30.4%) followed by >40 (29.3%), 31-40 (23.9%) and <20 (16.3%) years. The average age of patients was 35.63±15.98 ranging from 13 to 65 years. More than half of patients were males (57.6%). Fever was the most common minor symptom (70.7%). Headache was found to be second most common minor symptom (62%). Fatigue and ear pain/ear pressure was observed in 57.6% and 52.2% respectively. Nasal discharge/purulence/ discolored was the most common major symptom (70.7%). Facial congestion/fullness was found to be second most common minor symptom (64.1%). Facial pain/pressure and Hyposmia/anosmia was observed in 59.8% and 55.4% respectively.
Conclusion: This study concludes that chronic rhinosinusitis manifested more in middle aged patients with male preponderance. They clinically presented most commonly with nasal discharge

Key words: Chronic rhinosinusitis, Demographic, Clinical

INTRODUCTION

Rhinosinusitis is wide ranging diagnostic marker which consists a spectrum of disorders. It involves coexisting inflammation of mucosa of nose and paranasal sinus. [1, 2]

Chronic rhinosinusitis (CRS) is a varied entity which can be because of a number of different affecting factors. It coexists with or without nasal polyp. The clinical appearance of CRS is variable. But essentially will have one or more of presentation such as post nasal discharge, nasal congestion & obstruction, facial pain, pressure, fullness, disorders of smell, cough to eustachian tube dysfunction. [3] It has been reported that CRS has a prevalence of about 11%. It causes intense decrease in the quality of life. [4]

Rhinosinusitis can present in among all the age groups without any gender predisposition. A study conducted by Hsueh et al on identifying clinical symptoms on improving the symptomatic diagnosis of CRS showed no significant association of CRS and non-CRS patients in terms of age, gender and race. [5]

There is lack of evidence whether male and female patients having rhinosinusitis were different and whether they should be treated differently. So, a focused research in this area is warranted. [5] It affects between 5 to 15% of population according to Western literature. [2]

The objective of current study was to study the socio-demographic and clinical characteristics of chronic rhinosinusitis (CRS) patients in a tertiary care hospital.

MATERIAL AND METHODS

This was a cross sectional observational study conducted in a tertiary care hospital. All the patients having clinical findings of CRS referred from ENT Department for CT PNS constituted the study population. All the patients having clinical findings of CRS referred from ENT department for CT PNS were included in the study. Patients with malignancy/ history of trauma and not giving consent/Pregnancy were excluded from the study.

All the patients were submitted to detailed clinical examination, routine investigation & subsequently submitted for CT scan of PNS. The chronic sinusitis was defined as nasal blockade anterior nasal discharge, post nasal drip, headache or facial pain. These patient were refractory to medical treatment for >3 months duration.
Descriptive statistics are presented.

RESULTS

About one third of patients were between 20-30 years (30.4%) followed by >40 (29.3%), 31-40 (23.9%) and <20 (16.3%) years. The mean age of patients was 35.63±15.98 ranging from 13 to 65 years. More than half of patients were males (57.6%) (Table-1).
Fever was the most common minor symptom (70.7%). Headache was found to be second most common minor symptom (62%). Fatigue and ear pain/ear pressure was observed in 57.6% and 52.2% respectively (Table-2).

Table-1: Age and sex distribution of CRS patients

Age in years	No. (n=92)	%
<20	15	16.3
20-30	28	30.4
31-40	22	23.9
>40	27	29.3
Mean±SD, Median (Range)	35.63±15.98, 34 (13-65)	
Gender		
Male	53	57.6
Female	39	42.4

Table-2: Distribution of patients according to minor presenting symptoms

Minor symptoms*	No. (n=92)	%
Fever	65	70.7
Halitosis	32	34.8
Headache	57	62.0
Cough	30	32.6
Fatigue	53	57.6
Dental pain	34	37.0
Ear pain/ear pressure	48	52.2

*Multiple responses

Table-3: Distribution of patients according to major presenting symptoms

Major symptoms*	No. (n=92)	%
Nasal obstruction/blockage	37	40.2
Nasal discharge/purulence/discolored	65	70.7
Hyposmia/anosmia	51	55.4
Facial congestion/fullness	59	64.1
Facial pain/pressure	55	59.8

*Multiple responses

Nasal discharge/purulence/ discolored was the most common major symptom (70.7%). Facial congestion/ fullness was found to be second most common minor symptom (64.1%). Facial pain/pressure and Hyposmia/anosmia was observed in 59.8% and 55.4% respectively (Table-3).

DISCUSSION

In the present study, about one third of patients were between 20-30 years (30.4%) followed by >40 (29.3%), 31-40 (23.9%) and <20 (16.3%) years. Average age of the patients was 35.63±15.98 ranging from 13 to 65 years. In a study, patients ranged from age 18 years to 64 years. The mean age of the patients in their study was 34.44 years. They also found that 36.2% were in the age group of 18-27 years while 6.4% were in the age group of 57-66 years. [3] The finding of this study in terms of age correlates with the other studies. [6-9]
In this study, > half of patients were males (57.6%). This is in agreement with the study by Garg et al who found that there were 52.1% males and 47.8% female CRS patients. [3] It also correlated with studies of Ogunleye et al, Ameri et al and Ugincius et al. [7, 10, 8]

In the present study, fever was the most common minor symptom (70.7%). Headache was found to be second most

common minor symptom (62%). Fatigue and ear pain/ear pressure was observed in 57.6% and 52.2% respectively. Also, Nasal discharge/ purulence/ discolored was the most common major symptom (70.7%). Facial congestion/fullness was found to be second most common minor symptom (64.1%). Facial pain/pressure and Hyposmia/anosmia was observed in 59.8% and 55.4% respectively. These findings are in agreement with the studies of Rice, Levine, Nayak et al, Venkatachalam and Bhat in which the nasal discharge was the most common complaint followed by other symptoms like nasal blockage and headache. [11-14] Garg et al also reported that nasal discharge was the most common complaint with which patient presented to the hospital and was seen in 94 (100%) of patients followed by 87 (92.5%) patients who presented with complain of headache. [3]

One of the limitations of this study was small sample size compared to the global burden of chronic rhinosinusitis. The time period of study was limited. Being a tertiary care centre, we had a refractory group of patients.

CONCLUSION

This study concludes that chronic rhinosinusitis manifested more in middle aged patients with male preponderance. They clinically presented most commonly with nasal discharge.

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