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KEY WORDS: Chronic Rhinosinusitis, Sinusitis, Clinical Profile

CLINICAL PROFILE OF PATIENTS HAVING CHRONIC RHINOSINUSITIS: A DESCRIPTIVE STUDY IN TERTIARY CARE CENTRE

S.Sujatha Department of ENT, Government Medical College, Trivandrum, Kerala, India;

ABSTRACT

Chronic rhinosinusitis (CRS) is one of the most common conditions that physicians treat in ambulatory practice. Because of its diversity of presentation, accurate clinical diagnosis is often difficult. Objective of this study is to determine clinical profile of CRS. Tertiary care hospital level retrospective case series data analysis of 55 cases of CRS for a period of 1-year was done. Detailed analysis of demography and clinical features was done. Results were analyzed. CRS is a common medical condition but with a wide range of symptomatology. In the present study, it is shown as a disease with male predominance, affecting mostly the middle age group. Identifying CRS patients correctly, from other sinonasal conditions and providing healthcare interventions can greatly reduce the burden of disease

INTRODUCTION

Rhinosinusitis is a broad diagnostic label that encompasses a spectrum of disorders involving concurrent inflammation of the mucosa of the nose and paranasal sinus [1,2]. Chronic rhinosinusitis (CRS) is one of the most common healthcare problems for which an individual seeks medical care resulting in high direct medical cost[3]. Estimates suggest that CRS has a population prevalence of approximately 11% and may cause profound reduction in the quality of life [4]. This disease process has been described since antiquity but still raises questions about its etiology, pathophysiology and treatment. Recent studies have demonstrated that symptom-based definitions of CRS are imperfect in predicting whether the patient truly has disease. There is a significant lack of correlation between clinical and radiological features, so an accurate diagnosis of CRS is based on symptoms and objective investigations.

In this study, a detailed evaluation of demography and clinical features of a group of patients of CRS over a period of 1-year has been done.

OBJECTIVES

Objective of this study is to evaluate the clinical profile of cases of CRS.

MATERIALS AND METHODS

This is a tertiary care hospital level retrospective case series study. All patients came to ENT outpatient unit of Medical College, Thiruvananthapuram with a diagnosis of CRS, for a period of February 2014 to January 2015 were included in the study.

INCLUSION CRITERIA

1. All diagnosed cases of CRS,

The current working definition of CRS as defined by EPOS[5], is inflammation of the nose and the paranasal sinuses characterized by two or more symptoms, one of which should be either nasal blockage/obstruction/congestion or nasal discharge (anterior/ posterior nasal drip):

± Facial pain/pressure
± Reduction or loss of smell

And either endoscopic signs of polyps and/or mucopurulent discharge primarily from middle meatus and/or edema/mucosal obstruction primarily in middle meatus and/or compute tomography (CT) changes: Mucosal changes within the osteomeatal complex and/or sinuses. These criteria must be combined with more than 12 weeks symptoms without complete resolution of symptoms.

Case record of all patients came to ENT satisfying above definition for CRS for the prescribed time period are studied in detail. Age, sex, socio-economic status, presenting complaints, diagnostic nasal endoscopy (DNE) findings, and CT scan reports are evaluated in detail.

Ethical considerations

Protocol of the study was approved by the Institutional Review Board of Medical College, Thiruvananthapuram and is in accordance with the Helsinki Declaration of 1975 revised in 2000.

STATISTICAL ANALYSIS

Various possible factors were statistically compared including sex, age, cigarettes smoking, and other risk factors. Data were analyzed using SPSS version 17 and presented as mean ± standard deviation (SD).

RESULTS

In this study, a total of 55 patients were enrolled. These patients were in the age range from 11 to 66 years with mean age of 37.74 ± SD 16.46 years. These patients constitute 34 male and 21 female with male:female ratio was 1.6:1. The majority of male patients (41.8%) belonged to the group of patients in the age range 21-40 years with mean age 31.3 ± SD 5.7 years (Table 1).

Table 1: Patients distribution in age groups with mean and standard deviation (n=55)

Age range (years)	Age n (%)	Mean age (years)	SD
<20			
Male	5 (9.1)	15.8	3.1
Female	3 (5.4)	14.6	3.2
21–40			
Male	23 (41.8)	31.3	5.7
Female	13 (23.6)	28.0	5.8
>41			
Male	6 (10.9)	54.8	9.3
Female	5 (9.1)	52.2	8.1

Most of the patients (60%) had lower socio-economic status and mainly they were from urban area (74.54%) (Table 2). The most common symptoms of these patients were nasal stuffiness (85.45%), nasal discharge (72.72%) followed by facial pain 70.90% [4].Patients had complications of sinusitis as orbital cellulitis for 2, proptosis of left eye for one and mucocele of frontal sinus for one .All patients showed mucopus in middle meatus in DNE. 40 (72.72%) patients had associated deviated nasal septum, 35 (63.6%) had nasal polyposis also (Figure1).

Table 2: Socio demographic features of the patients (n=55)

Features	Frequency	Percentage
Male	34	61.81
Female	21	38.18
Rural	14	25.45
Urban	41	74.54
Lower socio–economic class	33	60
Upper socio–economic class	22	40
Associated diabetes mellitus	11	20
Associated allergy/atopy/asthma	42	76.38

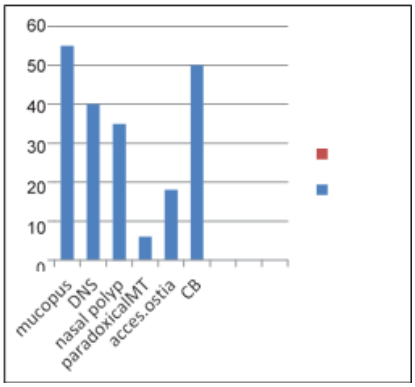

Figure 1Pre-operative diagnostic nasal endoscopic examination findings

DISCUSSION

CRS has varied clinical presentations. CRS can involve any age, however in our study the commonly suffered people belonged to age group 21-40 years, with mean age of 37.74 years which is consistent with study of Razmpa *et al* [6] having mean age of 36.6 years and with Yadav *et al* [7] were it is 30.6 years while it is at variance from study of Nair [8] where mean age was 54.8 years.

Both genders can be involved by sinusitis. In this study, males were predominantly affected (61.81%) which simulates to study of Yadav *et al*. with male predominance (68%) and differs from results of Nair and Michael et al [9] where female outnumbered.

The most common clinical features, in this study, were nasal obstruction (85.45%), nasal discharge (72.72%) and facial pain (70.9) which were comparable to the features reported by Khan [10] having nasal discharge (100%), nasal obstruction (92.3%), and headache (61.5%). Nair *et al* [11] also gives comparable clinical features in their study as nasal block 76.3%, and nasal discharge as 47.3%, while these were not an agreement to the results of Soontrapa *et al* [12] where most common features were fever (51.2%), facial pain (32.6%) and headache. In Shresta [13] study clinical features were headache and facial pain (82%), nasal blockage (90%), nasal congestion (50%), and nasal discharge (56%). The reason may be different patient intelligence level and inherent characteristics of pathogens.

In the present study, all cases showed mucopus in pre-operative DNE. There was also a high incidence of deviated nasal septum and concha bullosa. This is consistent with study of Shivakumar and Sambandan[3].

CONCLUSION

CRS is a common medical condition but with a wide range of symptomatology. In the present study, it is shown as a disease with male predominance, affecting mostly the middle age group. Common presentations were nasal block, nasal discharge, and facial pain. Identifying CRS patients correctly, from other sinonasal conditions and providing healthcare interventions can greatly reduce the burden of disease.

Limitations

As there is no protocol regarding the basic investigations for CRS in our institution, the pathological evaluation of nasal discharge was not done in all cases.

Abbreviations

- CRS: Chronic rhinosinusitis

Conflicts of Interest

None declared.

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