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Original Research Article

Clinico-epidemiological evaluation of patients with sinonasal masses attending a tertiary care hospital in Jharkhand: a three year retrospective study

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ABSTRACT

Background: Nasal cavity may contain wide variety of masses within by which this organ differs from the rest of the body. Benign nasal and paranasal sinus masses are commonly encountered in clinical practice. The purpose of this study was to classify various types of sinonasal masses and characterize their clinico-epidemiological profile in a tertiary care hospital of Jharkhand. The objectives of the study was to evaluate the clinico-epidemiological profile of nasal masses in patients attending ear, nose, throat and head and neck surgery (ENT & HNS) OPD of Rajendra Institute of Medical Sciences (RIMS), Ranchi from January 2013 to December 2015) and to classify the nasal masses according to their percentage of occurrence.
Methods: This retrospective study was designed for evaluation of clinico-epidemiological data collected from admission register of ENT Dept. RIMS, Ranchi during the period of 2013 to 2015. Total sample size for this period was 240. Templates were generated in MS Excel sheets and analysis was done using SSPS software.
Results: With the three year data analysis of 240 patients, we came up with the result that nasal masses were more common in age group of <20 years (52%), occurred more in males (68.4%), most of the patients were tribals (72.9%), mostly from rural areas (60%), and maximum of them were diagnosed as antrochoanal polyps (37.9%). The most common presenting complain was nasal obstruction (85.8%), followed by nasal discharge (52.9%).
Conclusions: Antrochoanal polyp is the most common type of nasal masses presenting mostly in tribal males from rural areas of Jharkhand, presenting with nasal obstruction.

Keywords: Clinico-epidemiological, Sinonasal masses

INTRODUCTION

The nose is the primary organ for smell, with other substantial functions and significances. Nasal masses are a common finding in ENT & HNS OPD with nasal obstruction, headache, nasal discharge, hyposmia or anosmia, etc. as presenting complains. Sinonasal masses can be of many types, malignant or benign, which can again be classified further. They may present intranasally, extranasally or as midline swelling as in dermoids, encephalocoeles, etc.

A polyp is a general term describing any oedematous, inflammatory mucosal prolapse, which as a part of sinonasal mass had been recognized medically long back by the ancient Egyptians and Hippocrates, rightly called as the "Father of Rhinology", described the procedure for their removal using a snare, and the same was well followed till the second half of the 20th century.[1] The prevalence of nasal polyps is 4% in the general population, while it is 40% in cadaveric studies; the cause usually being a combination of allergy and infections.[2-4]

The aim of this study is to focus on the clinico-epidemiological profile of patients with sinonasal masses and classification and analysis of its percentage of occurrence in the state of Jharkhand to the best possible extent.

METHODS

This retrospective study included the cases of nasal masses admitted in Department of ENT, RIMS, Ranchi, operated during the period of 2013-2015. A total of 240 subjects were included. All of them were having a visible mass in the nasal cavity with one or more symptoms of nasal masses as presenting complain, occurring due to any cause. All those found neoplastic upon investigation were excluded. Data were collected from admission register, Department of ENT, RIMS, Ranchi and analysed using SSPS (Version 20) software.

RESULTS

The socio-demographic profile of the patients of sinonasal masses on basis of age, sex, ethnicity and residence, shown in Table 1. Between January 2013 to December 2015, out of 240 cases included, maximum cases were in age group of <20 years age (52%), males (68.4%) presented more in in the OPD, tribals (72.9%) were more in number, and mostly cases were from rural areas (60%) of Jharkhand.

Table 1: Socio-demographic profile of patients with nasal mass.

Serial No.	Criteria	Groups	Frequency (n=240)	Percentage (%)
1.	Age	<20 years	125	52
		20-50 years	91	38
		>50 years	24	10
2.	Sex	Male	164	68.4
		Female	76	31.6
3.	Ethnicity	Tribal	175	72.9
		Non-tribal	65	27.1
4.	Residence	Urban	95	40
		Rural	144	60

Table 2: Classification of nasal masses on basis of percentage of occurrence.

Serial No.	Classification	Frequency (n=240)	Percentage (%)
1.	Antrochoanal polyp	92	38.3
2.	Rhinosporidiosis	74	30.8
3.	Bleeding polypus	28	11.7
4.	Ethmoidal polyp	24	10
5.	Rhinolith	11	4.6
6.	Angiofibroma	9	3.8
7.	Inverted papilloma	2	0.8

Table 3: Clinical features as presenting symptom.

Serial No.	Clinical Feature	Frequency	Percentage (%)
1.	Nasal obstruction	206	85.8
2.	Nasal discharge	127	52.9
3.	Intermittent bleeding	98	40.8
4.	Headache	80	33.3
5.	Hyposmia	74	30.8
6.	Facial pain	73	30.4
7.	Recurrent sneezing	46	19.7

Table 2 shows the classification of nasal masses according to their percentage of occurrence, maximum of which were diagnosed as antrochoanal polyp (37.9%).

Table 3 shows the presenting features in the order of their percentage of occurrence. Nasal obstruction (85.8%) was the most common presenting complain, followed by nasal discharge (52.9%).

DISCUSSION

In our study, sinonasal masses have more frequency in males (2.16:1). Similar results have been shown in studies by Zafar et al (1.7:1) and a British review of nasal

polyposis (2:1).[2,5] The mean age has been reported as 33 years by Bakari et al while Zafar et al reported it as 22.5 years.[5,6] In our study of benign sinonasal masses, mean age was 10-20 years.

Antrochoanal polyp (37.9%) was the most common mass encountered, while cases of rhinosporidiosis were 30.8%, all with strong history of taking bath in lakes and ponds. Rhinosporidiosis is an endemic disease in India, Sri Lanka and a few African nations.[7]

10% of the cases were of ethmoidal polyposis, that is in accordance with that in a study by Bakari et al and Humayun et al.[6,8] Most of them responded well to steroid nasal sprays. 72.9% cases were tribals, Jharkhand being a tribal state and 60% cases came from rural areas. Among the common presentations were nasal obstruction (85.8%), nasal discharge (52.9%) and intermittent epistaxis (40.8%).

CONCLUSION

Sinonasal masses have various differential diagnoses. Our study showed benign nasal masses are more common in young age group (<20 years) males mostly of tribal ethnicity and more than one-third cases are of Antrochoanal polyp. Nasal obstruction is the most common symptom. Medical management is often not adequate and has a limited role. Surgery is the treatment of choice for benign lesions. Certain benign tumors have high potential for malignant transformation while others can present with locally destructive features and deformities.

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