

Sinonasal Mass: A Retrospective Study in a Tertiary Care Centre**Mili M¹, Sarma D², Sangma R³, Borah S^{4*}, Sarmah M⁵, Sharma M⁶**

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Abstract:

Introduction: Sinonasal masses are one of the common findings among ENT patients. The incidence of sinonasal mass is increasing and a variety of lesions involving nose and paranasal sinuses are encountered in day-to-day practise.

Objective: he study was undertaken with an objective to study the clinico-pathological profile of sinonasal masses in a tertiary care center of upper Assam, India.

Materials and Methods: A total of 40 cases were studied in the from the period August 2021 to July 2022 attending the OPD of Department of ENT and Head and Neck Surgery, Assam Medical College Dibrugarh.

Results: Most of the cases belonged to age group of 41-60 years. Mostly encountered non-neoplastic lesion was antrochoanal polyp (40%). Inverted papilloma being the most common benign lesion (15%) and metastatic undifferentiated carcinoma (7.5%) was most common malignant neoplastic mass noted.

Conclusion: Sinonasal masses encompass broad pathology. Early detection and management help to improve prognosis.

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Introduction

The incidence of sinonasal mass is increasing day by day. [1] A sinonasal mass can have a wide range of histopathological patterns, ranging from inflammatory, neoplastic (benign or malignant), to allergic. Its infective (fungal) manifestations are also not uncommon. [2]

Various etio-pathological reasons can be cited leading to its occurrence. Starting from genetic predisposition to geographical distribution, its prevalence is gradually increasing manifold. Other factors such as atopy, dietary preservatives, nutritional deficiencies, lower socioeconomic status- all have played a role in its resurgence. Ancient records of skull lesions in paranasal sinuses, to incidence of mucormycosis, predict its prevalence since time immemorial. [3] Hippocrates (Father of Rhinology) described sinonasal masses as early as 460-370 B.C.2

Sinonasal mass comprises 0.2-0.8% of overall and 3% of all malignant tumours of head & neck in children and adult below 30 years of age. [4] Most common presentation is nasal obstruction.2 Epistaxis, hyposmia, ocular abnormalities, facial deformity are also its clinical features. [4]

This study aims to study the clinico-pathological profile & trend of management of sinonasal masses in a tertiary care center of upper Assam, India.

Methods & Materials

The study was carried out at Assam Medical College which is a tertiary care hospital of Upper Assam, India. A total of 40 case record were studied from August 2021 to July 2022, who visited with complaints of nasal obstruction, bleeding from nose ,mass in the nose, rhinorrhoea, hyposmia and deformity of nose and face. Patients who refused admission to the hospital or were referred to apex centres were excluded. Ethical approval was obtained from the Institutional Ethical Committee of the medical college vide no 2023/AMC/EC/805. The collected data was tabulated in Microsoft Excel Worksheet 2007. The categorical variables are summarised as percentages and proportions.

Results

Majority of the cases belonged to age group of 41-60 years (35%). It was followed by age group of 0-20 years (32.5%), age group of 21-40 years (25%)

of age and age group of 61-80 years (7.5%) of age. Male: female ratio was 1.6:1. Mostly encountered cases were non- neoplastic lesion (67.5%). Cases of Benign neoplastic masses were (20%) and malignant neoplastic masses were (12.5%). Out of the non-neoplastic masses, antrochoanal polyp (40%) and ethmoidal polyp comprised of (25%) of cases. Inverted papilloma was found to be the most common benign lesion. Few cases of malignant neoplastic mass were also seen which included adenocarcinoma (2.5 %), squamous cell carcinoma (5 %), esthesioneuroblastoma (2.5%) and

undifferentiated carcinoma (2.5 %). One mucormycosis case of paranasal sinuses was also recorded. Symptom wise most common symptom was nasal obstruction in 70% cases. Out of 40 cases, (76.5%) of cases underwent FESS followed by (23.5%) of cases who underwent medial maxillectomy by lateral rhinotomy approach. Besides 2.5% of cases underwent Surgery combined with Radiotherapy and (5%) of cases were subjected to concurrent Chemo-radiation. The remaining 5% underwent Radiotherapy.

Table 1: Age – wise distribution of cases

Age (in years)	No. of cases	Percentage (%)
0-20	13	32.5%
21-40	10	25%
41-60	14	35%
61-80	3	7.5%

Table 2: Gender- wise Distribution of cases

Gender	No. of cases	Percentage (%)
Male	25	62.5%
Female	15	37.5%
Ratio	1.6:1	

Table 3: Distribution of cases according to type of lesion

Type of lesion	No. of cases	Percentage(%) (n=40)
Non-neoplastic mass	27	67.5%
Benign neoplastic mass	8	20%
Malignant neoplastic mass	5	12.5%

Table 4: Distribution of non- neoplastic mass

Non-neoplastic mass	No. of cases	Percentage (%)
Antrochoanal polyp	16	40%
Ethmoidal polyp	10	25%
Mucormycosis.	1	2.5%

Table 5: Distribution of benign neoplastic mass

Benign neoplastic mass	No. of cases	Percentage (%)
Inverted papilloma	8	100%

Table 6: Distribution of malignant neoplastic mass

Malignant neoplastic mass	No. of cases	Percentage (%)
SCC	2	5 %
adenocarcinoma	1	2.5%
Undifferentiated carcinoma	1	2.5%
esthesioneuroblastoma	1	2.5%

Table 7: Presenting complaints among Sino-nasal mass

Clinical Feature	No of cases	Percentage
Nasal obstruction	28	70
Nasal discharge	4	10
Decreased smell sensation	3	7.5
Bleeding from nose	3	7.5
Headche	1	2.5
Facial swelling	1	2.5

Table 8: Determination of treatment protocol

Treatment protocol	No. of cases	Percentage (%)
Surgery.	34	85
FESS	26	76.5%
Medial Maxillectomy by lateral Rhinotomy Approach	8	23.5%

Surgery + RT	1	2.5%
CT+RT	2	5%
RT (Radiotherapy)	2	5%

Discussion

In this study the male: female ratio was 1.6:1, which is similar to study done by Zafar [5] et al who found male: female ratio of 1.7:1.

Most cases of sinonasal mass were observed in the 4th to 6th decades of life in our study, while Bakari [6] et al reported a peak incidence of cases in the 3rd to 4th decade. Nasal obstruction being most common complaint, which was similar to the study done by Narayan Swamy [7] et al (76.6%). N Khan [8] et al found that 86.6% of cases had inflammatory nasal polyp as the most common non-neoplastic lesion, which is discordant to our study, where we got antrochoanal polyp (40%) as the most common. In a study by Janice [9] et al, squamous cell carcinoma was the commonest malignant lesion, which is similar to our finding of SCC to be highest among malignant lesions (7.5%). Lathi [10] et al found that nasal obstruction was most common symptom and surgical excision (25%) and FESS (44.6%) were most commonly employed treatment measures, while we recorded (76.5%) & (23.5%) who underwent FESS & lateral rhinotomy respectively. However, in our study it was found that (2.5%) of patients had undergone surgery combined with radiotherapy, whereas (5%) of patients had undergone radiotherapy and chemotherapy respectively. Vasileios [11] et al in their study showed that (18.9%) of patients received primary radiotherapy and (22.1%) received neoadjuvant and platinum-based chemotherapy. Owing to the pandemic of Covid - 19, one patient who suffered from Mucormycosis (complication of Covid-19) died due other systemic causes 2 weeks after FESS with debridement.

Conclusion

Sinonasal mass, which having wide spectrum from benign to malignant, affects people of all ages. Early diagnosis, prompt treatment and regular follow-up comprises its management protocol. Besides we should consider identifying the etiological factors necessary to control its prevalence and decrease mortality. However, radiological imaging, histopathological examination and clinical assessment of all should be considered during evaluation of patients with such complains such as nasal obstruction, epistaxis, hyposmia, diplopia and external maxillofacial deformity. Association between its clinical, histopathological, radiological findings helps in diagnosis, early detection and treatment.

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