

SINONASAL MASSES: A CLINICO PATHOLOGICAL STUDY AT TERTIARY CARE CENTREManish Kumar Sachan¹, A. K. Jain², R. Nigam³, Freni J. K⁴**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: AIMS: To study the demography of sinonasal masses, clinical presentation, histopathological pattern and to correlate clinical findings with histopathology. **MATERIALS AND METHODS:** The present study entitled "Clinico pathological study of sinonasal masses" was carried out in 100 patients who attended the ENT OPD and inpatients in the Department of Otorhinolaryngology and Head and Neck Surgery, Gajra Raja Medical College, Gwalior (M.P.) and associated with J.A. Group of Hospitals, Gwalior (M.P.) during the period of July 2011 to June 2013 who were diagnosed as cases of sinonasal masses on the basis of clinical and histopathological examination. **RESULTS:** 32% patients were in age group 15-24 years, 64% were males. Most significant complaints were nasal obstruction and rhinorrhoea. Among 100 patients, nasal polyps were diagnosed in 83 patients, angiofibroma in 7 patients, septal angioma in 2 patients, rhinosporidiosis in 2 patients and one case each of capillary haemangioma, squamous cell carcinoma, angiosarcoma, transitional cell carcinoma and nasopharyngeal carcinoma was present. **CONCLUSION:** In the present study of masses in sinonasal cavity, most of the patients presented with trivial nasal symptoms, and there is always a possibility to miss the diagnosis if great care is not taken while examining the patient. The findings must be interpreted in light of great clinical suspicion, and complete ENT examination including radiologic and endoscopic studies.

KEYWORDS: Nasal masses, Sinonasal masses.

INTRODUCTION: The nose apart from being the most prominent part of the face also carries aesthetic and functional significance. It carries an aura of emotional and cultural importance. The nose because of its anatomical location and passage regarded as the direct avenue to the brain, man's source of intelligence and spirituality.

Sino-nasal masses may seem to be a simple problem but it raises many questions about the differential diagnosis and management due to their late presentation and juxtaposition to structures like eye and brain.

Nasal polyps as the sinonasal masses were the first medically recognized condition since the time of ancient Egyptians. Hippocrates described removal of these polyps with a snare, a method which persisted well into the second half of the 20th century.

Nasal masses are common finding in ENT Outpatient department. A variety of non- neoplastic (Congenital, Traumatic, inflammatory), and neoplastic conditions involve the sino-nasal cavity. The incidence of these sino-nasal masses is found to be between 1-4% of the population.

The neoplasms of sino-nasal cavity accounts for 3% of all head and neck cancers and 0.2 to 0.8% of all carcinomas. Geographically the African, the Japanese, and the Arab population are most affected but found rarely in Western Europe and America.

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The Sinonasal masses of inflammatory origin include polyps which are usually of allergic origin. These are commonest nasal masses. Many patients with sinonasal mass present with complaints of nasal obstruction. Other symptoms include nasal discharge, epistaxis and smell disturbances.

A presumptive diagnosis of sinonasal mass can be achieved by detailed history, clinical examination, and diagnostic nasal endoscopy along with advanced imaging (CT scan and MRI). Radiographic evidence of thickened mucosa, opacity in sinuses and bony erosion are helpful findings in diagnosing different disease.

A careful histopathological examination is the most essential investigation to decide nature of a lesion so as to reach at final diagnosis and management accordingly. The present study is conducted to evaluate the clinicopathological profile of masses in the sino-nasal tract and to show the fact that not all sino-nasal masses with nasal obstruction are of allergic origin.

MATERIALS AND METHODS: The present study entitled "Clinicopathological study of sinonasal masses" was carried out on 100 patients attending the ENT OPD and inpatients in the Department of Otorhinolaryngology and Head and Neck Surgery, Gajra Raja Medical College, Gwalior (M.P.) and associated with J.A. Group of Hospitals, Gwalior (M.P.) during the period of July 2011 to June 2013 who were diagnosed as cases of sinonasal masses on the basis of clinical and histopathological examination

A detailed history especially in reference to age, sex, residence, occupation, family history, personal history, allergic disorder, addiction to tobacco and alcohol, general examination, local examination especially of nose, PNS and histological examination was done on all the patients and noted on a specific proforma after taking an informed consent. Males or females of age between 5 and 70 years who presented with sinonasal mass were included in our study.

RESULTS AND DISCUSSION:

- The most common age group involved was 15 – 24 years. Study conducted by Gupta Richa, Moupachi Surendra, Poorey V (2013)¹ reveals that most of the patients belonged to 11-20 year age group. The maximum numbers of patients were presented during second decade. Bakari et al (2010)² had reported a peak incidence of 33 years.
- The incidence among males was 64% and females 36% with M: F ratio 1.77: 1. U. Zafar, N. Khan, N. Afroz, S. A. Hasan (2008) also revealed similar observation with M: F ratio of 1.7: 1. Parajuli, S, Tuladhar. A (2013)³ in their study a slight female preponderance was observed with male: female ratio as 1:1.31
- Patients belonging to rural area were 83% and urban 17%. Kazi Shameemus Salam, A. Allam Choudhary et al (2009)⁴ in their "clinicopathological study of sinonasal malignancy", reveals that most of their patients came from rural areas (66.6%).
- 83% of the patients had unilateral presentation of Sinonasal masses and 17% bilateral. In the study by Gupta Richa, Moupachi Surendra, Poorey V(2013)¹, about 48.9 % cases showed mass on left side, 34.78% on right side and 16.3% bilateral.
- 91% of the patients had symptoms of nasal obstruction, nasal mass in 37%, headache in 20%, rhinorrhoea in 16%, sneezing in 14%, epistaxis in 13% and anosmia in 10 %. Kazi shameemus salam, A.Allam Choudhary et al (2009)⁴ also revealed nasal obstruction as the main symptom,

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followed by nasal discharge, headache and epistaxis. AHM Humayun, Zahurul Huq, Ahamed SMT et al(2010)⁵ observed that regarding clinical presentation almost all inflammatory diseases had common history of nasal obstruction (100%), second most frequent symptom was nasal discharge. (82.85%).

- Nasal cavity was involved in all the 100 patients. Extension to paranasal sinuses was seen in 95%, nasopharynx 23%, oropharynx in 16%, intracranial in 3% and orbital extension in 3% patients.
- Among all the 100 patients, 83% were histopathologically diagnosed to have nasal polyps, angiofibroma in 7%, rhinosporidiosis in 2%, septal angioma in 2%. One case each of capillary haemangioma, squamous cell carcinoma, angiosarcoma, transitional cell carcinoma, nasopharyngeal carcinoma, olfactory neuroblastoma was present.
- Among nasal polyps, non- allergic polyps were much common than allergic polyps.
- In the present study, 85% lesions were non neoplastic, 10% benign neoplastic and 5% malignant neoplastic. In the study of 345 cases by Dasgupta et al (1997),⁶ 175 (50.7%) non neoplastic lesions and 170 (49.3%) neoplastic lesions were found. Among the non-neoplastic lesions, true nasal polyps accounted for 110(63.8%) cases, 74(63.3%) being allergic and 36 (32.7%) being inflammatory ones. Kazi Shameemus Salam, A. Allam Choudhary et al (2009)⁴ in their clinicopathological study of sinonasal malignancy, majority of the patients 21 had squamous cell carcinoma (70%) followed by adenoid cystic carcinoma 2 (6.66%), adenocarcinoma 2 (6.66%), NHL 2 (6.66%), transitional cell carcinoma 1 (3.33%), olfactory neuroblastoma 1 (3.33%).

CONCLUSION: Clinical diagnoses of sinonasal masses are often difficult and have to be relied on histopathological examination of biopsy specimen and may require repeated biopsies. Management of these patients is challenging due to varied presentation and lack of definite protocol. Timely diagnosis and early medical treatment will decrease the burden of morbidity and mortality in these patients.

To conclude, categorizing the sinonasal lesions according to histopathological features into various types helps us to know the clinical presentation, treatment, clinical outcome and prognosis of the disease.

Sl. No.	Age Group	Total	Percentage
1.	05-14	19	19%
2.	15-24	32	32%
3.	25-34	13	13%
4.	35-44	17	17%
5.	45-54	04	04%
6.	55-64	13	13%
7.	> 65	02	02%
	Total	100	100%

Table1: Age distribution of Sinonasal Masses

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Sl. No.	Sex	Numbers	Percentage
1.	Male	64	64%
2.	Female	36	36%
	Total	100	100%

Table 2: Sex distribution of Sinonasal Masses

Sl. No.	Classes	Numbers	Percentage
1.	Nasal Obstruction	91	91%
2.	Rhinorrhoea	16	16%
3.	Sneezing	14	14%
4.	Epistaxis	13	13%
5.	Headache	20	20%
6.	Anosmia	10	10%
7.	Mass in nasal cavity	37	37%

Table 3: Distribution of Sinonasal Masses by Symptomatology

Sl. No.	Classes	Numbers	Percentage
1.	Nasal Cavity	100	100%
2.	Paranasal Sinuses	95	95%
3.	Eye	03	03%
4.	Intracranial	03	03%
5.	Oropharynx	16	16%
6.	Nasopharynx	23	23%

Table 4: Distribution of Sinonasal Masses by Extension

Sl. No.	Classes	Total	Percentage
1.	Nasal Polyps	83	83%
2.	Rhinosporidiosis	02	02%
3.	Angiofibroma	07	07%
4.	Septal angioma	02	02%
5.	Capillary Haemangioma	01	01%
6.	Squamous cell carcinoma	01	01%
7.	Angiosarcoma	01	01%
8.	Transtional Cell Carcinoma	01	01%
9.	Nasopharyngeal Carcinoma	01	01%
10.	Olfactory Neuroblastoma	01	01%

Table 5: Distribution of Sinonasal Masses by Histopathology

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Sl. No.	Classes	Total	Percentage
1.	Non Neoplastic	85	85%
2.	Neoplastic – Benign	10	10%
3.	Neoplastic – Malignant	05	05%
	Total	100	100%

Table 6: Incidence of Neoplastic and Non neoplastic lesion

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