



## A CLINICAL STUDY ON THE UNILATERAL NASAL PATHOLOGIES.

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**ABSTRACT**

**Background:** Patients with unilateral nasal complaints need thorough assessment as there is suspicion of malignancy.

**Methods:** A retrospective study was carried out from March 2019 to March 2020 in the Department of ENT, Alluri Sitarama Raju Academy of Medical Sciences, Eluru.

**Results:** The study includes a total of 43 cases with unilateral nasal lesions. Neoplastic cases comprised of 12 (27.91%) in which seven are benign, and five are malignant.

**Conclusions:** The clinician must maintain a high index of suspicion to rule out a neoplastic aetiology in all cases of unilateral nasal mass.

**KEYWORDS :** Unilateral nasal pathology, nasal block, nasal mass.

**INTRODUCTION:**

Unilateral sinonasal mass lesions comprise 6% of all paranasal pathologies.<sup>1</sup> The clinician must be aware of the varied presentations with different etiologies. All unilateral mass lesions should be evaluated as the malignant lesion unless proved otherwise.<sup>2</sup> The frequently seen malignant and benign sinonasal tumours are squamous cell carcinomas and nasal polyps, respectively.<sup>3</sup> It is a routine thing that in adults, the unilateral sinonasal mass is assumed to be inverted papilloma or a malignant lesion.

As the anatomy of paranasal sinuses is complex, it allows the tumor to grow and fill a particular sinus or nasal cavity before invading the periosteum/perichondrium or bone. The patient will present with late disease because of this growth.

Sinonasal and nasopharyngeal masses are common findings in the ENT department. The incidence is 1-4% of the population.<sup>4</sup> Neoplasms of the sinuses and nasal cavity account for 0.2-0.8% of all carcinomas.<sup>5</sup> Benign lesions are more than that of malignant ones. The prevalence rate of nasal polyp is about 2%.<sup>6</sup>

**METHODS:**

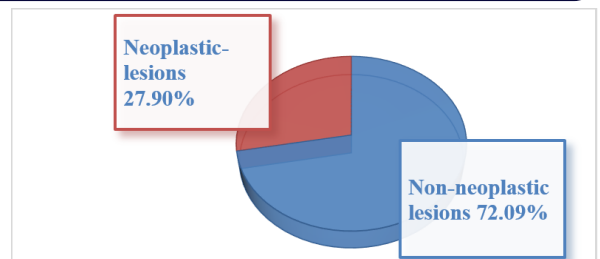
A retrospective study was carried out from March 2019 to March 2020 in the Department of ENT, Alluri Sitarama Raju Academy of Medical Sciences, Eluru. This study is for only those patients presenting with unilateral sinonasal lesions. The assessment consists of detailed history, complete otorhinolaryngological examination, including diagnostic nasal endoscopy. The initial provisional diagnosis is by clinical signs and investigations.

Detail history for this study include demographic characteristics such as age, sex, occupation, main presenting symptoms, duration of symptoms.

The medical management is for the cases presenting with inflammatory conditions. These were managed medically, and if unresponsive, then endoscopic surgical resection was done. The endoscopic biopsy is necessary for neoplastic patients, followed by definitive management depending on the histopathological diagnosis.

**RESULTS:**

The study includes a total of 43 patients & non-neoplastic lesions formed the most extensive group, 31 cases (72.09%) (Pie diag.1). Rawat et al. found 68.56% cases as non-neoplastic and 31.44% as neoplastic.<sup>7</sup>

**Pie diagram: 1**

Neoplastic cases are 12 (27.91%) in which seven are benign, and five are malignant. In our study, nasal polyp (67.7%) is the most common inflammatory condition, whereas inverted papilloma, 57.14% is the most common benign lesion.

In malignant cases, nasopharyngeal carcinoma cases were more frequent. Fungal sinusitis cases include Aspergillosis, Mucormycosis and Actinomyces cases (Table.1). Unilateral nasal masses are more common in the age group of 31-40 years (25.58%), and least affected age group is 0-10 years (4.65%). The gender distribution is equal in less than ten years of age, and males are more dramatic in the age group of 11-20 years. (Table:2)

**Table:1**

NON-NEOPLASTIC LESIONS (31) 72.09%	NEOPLASTIC LESIONS, (12) 27.90%	
	<b>Benign (7) 58.33%</b>	<b>Malignant (5) 41.66%</b>
Inflammatory Polyp (21) 67.7%	Ameloblastoma (1) 14.28%	Nasopharyngeal Carcinoma (3) 60%
Antrochoanal Polyp (5) 16.12%	Inverted Papilloma (4) 57.14%	Non - Hodgkins Lymphoma (1) 20%
Aspergillosis (1) 3.22%	Lobular capillary haemangioma (1) 14.28%	Maxillary carcinoma (1) 20%
Mucormycosis (1) 3.22%	Sinonasal Haemangiopericytoma (1) 14.28%	
Actinomyces (1) 3.22%		
Non-Specific inflammatory lesion (1) 3.22%		
Naso -alveolar cyst (1) 3.22%		

**Table:2**

Age group(years)	Male	Female	Total cases	Percentage (%)
1-10	1	1	2	4.65%
11-20	7	3	10	23.25%
21-30	4	4	8	18.60%
<b>31-40</b>	<b>6</b>	<b>5</b>	<b>11</b>	<b>25.58%</b>
41-50	3	2	5	11.62%
51-60	3	1	4	9.30%
61yrs and above	2	1	3	6.97%

Nasaldischarge which can be mucoid or mucopurulent, unilateral nasal obstruction, and the presence of nasal growth were the most common symptom almost in all the patients. Epistaxis and cervical lymphadenopathy were observed to be common among patients with neoplastic lesions. (Table:3) At initial stages, it may be difficult to differentiate the symptoms from common cold or rhinosinusitis. It is thus imperative to fully evaluate patients presenting with these symptoms by taking thorough history, complete head-and-neck examination, endoscopic, and radiological evaluation.

**Table: 3**

Symptoms	Non-neoplastic (31) cases	Benign cases (7)	Neoplastic (5) cases
Nasal obstruction(unilateral)	29	7	2
Nasal discharge	30	7	4
Epistaxis	4	6	5
Headache	21	6	2
Facial pain	12	5	2
Dental complaints	1	2	1
Orbital complaints(epiphora)	1	1	1
Neck swelling	0	0	5

**DISCUSSION:**

The presence of unilateral pathology is regarded with caution as neoplasms may also present during their early stages with subtle symptoms that mimic an inflammatory pathology. The objective is to analyze the varied presentations of patients with unilateral nasal mass and to identify features suggestive of neoplastic pathology. Non-neoplastic inflammatory polyps were usually unilateral and single, in agreement with the analysis of Frosini et al. **Nasal polyp** came as the typical non-neoplastic lesion per Chavan et al. study.

In the medical management of nasal polyps, corticosteroids are of use in allergic conditions. The surgical resection is the indication for most of the non-neoplastic and benign neoplastic nasal masses.

Selection of the imaging modality depends on various factors such as the patient's age, the availability of some modalities, the location of the mass, and the need for sedation or anesthesia. CT and MR imaging are complementary examinations, and although MR imaging is now the preferred examination for evaluating many of these lesions, CT may be necessary to further assess bone changes. However, caution is always recommended when considering the use of CT in children owing to the potential increased risk of carcinogenesis from ionizing radiation.

Lobular capillary hemangioma or pyogenic granuloma is uncommonly localized in the nasal cavity.<sup>19</sup> We got one lobular haemangioma case, which presented with nasal obstruction, occasional bleeding from the left nasal cavity. Clinically, it is a single, reddish, globular mass occupying whole of the left nasal cavity. Gentle probing reveals its attachment to the anterior septal wall and surgical resection with cauterization of the base done.

**Inverted papilloma** is the most typical benign lesion. Endoscopic medial maxillectomy is the treatment for Inverted papilloma cases.

The sinonasal haemangiopericytoma case is operated with the help of the neurosurgery department. The tumour is seen in the left nasal cavity, extending to the left maxilla, sphenoid sinus and anterior skull base occupying the entire nasopharynx. Navigation guided endoscopic trans-nasal, trans-maxillary, trans-sphenoidal decompression of the tumour done.

Patients presenting with unilateral facial pain and swelling, blood-stained nasal discharge, dental and orbital symptoms with erosion or destruction of bone on radiology should alert the clinician to rule out the malignant lesion.

Among 3 Nasopharyngeal carcinoma cases, 2 are undifferentiated histologic type, and one case is keratinized squamous cell carcinoma. All three patients had cervical lymph node enlargement. The treatment required wide surgical excision, radiotherapy or chemotherapy either alone or in combination.

The maxillary carcinoma case staged as T<sub>2</sub> N<sub>2a</sub> M<sub>0</sub> with anterior wall erosion, single ipsilateral neck node 4cm, without any metastasis. This case is lost for follow up after biopsy. Non-Hodgkins Lymphomas of the sinonasal tract are uncommon malignancies representing 3% to 5% of all malignancies. The treatment was radiotherapy combined with chemotherapy. All of the cases of malignancy presented with neck swelling.

**CLINICAL IMAGES:**



**Figure.1 Left antro-choanal polyp**

**Figure.2 Naso-alveolar cyst**



**Figure 3: Sinonasal haemangiopericytoma**



**Figure 4: Lobular capillary haemangioma**



**Figure 5,6: Clinical presentation of Non-Hodgkins lymphoma**



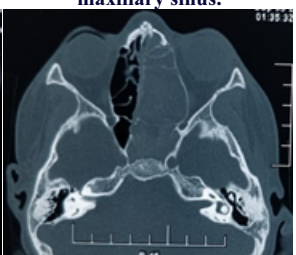
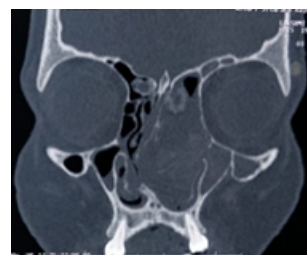
**Radiological images:**



**Figure 7: Left antro-choanal polyp**



**Figure 8: Ca-maxilla causing erosion of the anterior wall of maxillary sinus.**



**Figure 9,10: Fungal sinusitis coronal and axial cuts**

**CONCLUSION:**

Neoplastic lesions of nose and paranasal sinus are one of the most

challenging conditions that otorhinolaryngologists have to diagnose and treat. The presence of extensive soft tissue involvement and bony destruction on CT scan should raise the suspicion of a possible neoplastic lesion. Nasal endoscopy with biopsy remains the gold standard for diagnosis. The clinician must be aware of the varied presentations with different etiologies and accordingly maintain a high index of suspicion to rule out a neoplastic aetiology in all cases of unilateral nasal mass.

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