

# Clinico-Pathological Spectrum of Sinonasal Masses: A Tertiary Care Hospital Experience

**Abhishek Maheshwari**

Maheshwari Medicare Centre, India

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## BACKGROUND

Sinonasal masses (SNM) are a fairly common clinical entity that occurs amongst patients of all age groups. They encompass a very wide range of pathologies ranging from non-neoplastic to neoplastic in nature. Their presenting features are diverse and depend upon the type, spread and extent of the primary disease. Accordingly, the patients may have nasal features (obstruction, discharge, nasal mass, epistaxis, smell abnormalities), features of oro-facial involvement (palatal or buccal swelling, loose teeth, facial pain and swelling), orbital features (epiphora, proptosis, diplopia), aural features (fullness, hearing impairment), and/or metastatic neck nodes.

These masses can be congenital or acquired. Congenital masses such as dermoid cysts, glioma and encephaloceles are predominantly midline swellings, and may present either intranasally or extranasally. Acquired sinonasal masses can be inflammatory including allergic, traumatic, granulomatous or neoplastic (benign and malignant) in nature. Acquired pathologies presenting with sinonasal masses include nasal polyps (antrochoanal and ethmoidal), rhinosporidiosis, fungal sinusitis, hemangiomas, inverted papilloma, angiofibroma, malignancies etc.

There symptoms and signs frequently overlap, hence a diagnostic dilemma exists. A correct diagnosis is prudent for instituting correct treatment and expecting recovery. Hence there is a prudent role of thorough history, clinical examination, nasal endoscopy, radiological imaging and histopathology in reaching a definite diagnosis. The purpose of this retrospective analysis was to decipher and study the various pathologies that present as sinonasal masses.

## METHOD

A retrospective analysis done on 80 patients of SNM who presented to the Department of ENT, Subharti Medical College and Hospital, Meerut from May 2016 to April 2017. All cases that had a newly confirmed SNM were included in the study, whereas previously treated/recurrence cases were excluded. A thorough workup was done for all cases that included detailed history, clinical assessment, diagnostic nasal endoscopy and histopathological examination (HPE). Radiological investigations like X-ray PNS (nose and paranasal sinuses), computed tomography (CT scan) PNS coronal, axial & sagittal sections and magnetic resonance imaging were performed as per requirement. The data obtained

was compiled using a predesigned proforma for all cases. The tissue specimen for the histopathological evaluation was obtained by biopsy or by surgical excision of the SNM, as feasible. Microsoft office excel 2007 software was used for data analysis.

## RESULT

Out of the 80 cases, the SNM were non-neoplastic in 53 cases (66.25%) and neoplastic in 27 cases (33.75%). SNM were male predominant (65%). The age range of the patients was from 7 to 76 years. Non-neoplastic SNM were common in the age group of 11 to 40 years. Benign neoplastic SNM were common during the 2nd to 4th decade of life, while malignant neoplastic SNM were common from 5th decade onwards. Nasal obstruction was the most common presenting problem (71 cases, 88.75%) followed by nasal discharge (58 cases, 72.5%). The SNM were unilateral in 45 cases (56.25%) and bilateral in 35 cases (43.75%). There was a solitary SNM in 47 cases (58.75%) while they were multiple in 33 cases (41.25%). Nasal obstruction was the most common presenting feature (71 cases, 88.75%). Nasal polyps were the most commonly encountered SNM.

## CONCLUSION

The nose is an important part of the face and is associated with an individual's dignity and pride. It carries a considerable aesthetic, functional, emotional and cultural value. Large number of pathological conditions, both non-neoplastic and neoplastic arise from the sinonasal tract and are frequently encountered in day to day clinical practice. A thorough history, presenting symptoms and signs in conjunction with information provided by advanced imaging techniques help to frame a presumptive diagnosis, but histopathological evaluation remains the gold standard for reaching a definitive diagnosis, which is prudent for timely intervention and recovery. Diagnostic nasal endoscopy is an advanced diagnostic tool that helps in early detection of nasal pathologies. Classically, benign neoplasms expand and remodel bone and aggressive malignancies destroy and invade adjacent tissues, causing ill defined margins. SNM have a male predominance and majority are non-neoplastic. Nasal polyps are the most commonly encountered SNM, seen during 2nd to 4th decade of life, while squamous cell carcinoma is the most commonly encountered malignancy, generally from 5th decade onwards. Majority of the non-neoplastic and benign neoplastic SNM require surgical excision, while malignant neoplastic SNM require wide surgical excision, radiotherapy or chemotherapy either alone or in combination. A regular follow-up is mandatory for early detection of recurrence or metastases.