

Clinicopathological Study of Mass in Sinonasal Cavity and Nasopharynx a Study at Tertiary Care Health CentreRamawatar Meena¹, Deep chand², Gaurav Gupta³, Vivek samor⁴, Manphool Singh⁵^{1,5} Resident Doctor, ² Senior Professor, ^{3,4} Associate Professor

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Correspondence Author: Deep chand, Senior Professor, Department of otorhinolaryngology, Head and Neck Surgery, S.P. Medical College & A.G. Of Hospitals, Bikaner**Type of Publication:** Original Research Paper**Conflicts of Interest:** Nil**Abstract****Background-** The nasal cavity and paranasal sinuses (PNS) form a single functional unit with common pathological process affecting both, most of which are inflammatory. Sinonasal mass (SNM) is a common finding in the ENT department.**Methods-** The study was conducted on patients having sinonasal and nasopharyngeal masses admitted in dept of ENT, S.P.M.C.Bikaner(Rajasthan) from August 2016 to July 2017.**Results-** the clinical profile of patients. 72% patients complaining of nasal discharge followed by 70% nasal obstruction, 41% cases each have sneezing & alteration in smell, 37% sinus tenderness, 28% cases have post nasal drip, 26% bleeding per nasal, 19% swelling of face, 10% ear discharge, 6% epiphora and only one case each have palatal bulge & change in voice.**Conclusion-** For proper evaluation of sinonasal and nasopharyngeal masses, clinical, radiological and histopathological evaluation should be done in all patients.**Keywords-** Sinonassal masses, Nasopharynx, Polyp, Nasal obstruction.**Introduction**

The nasal cavity and paranasal sinuses (PNS) form a single functional unit with common pathological process

affecting both, most of which are inflammatory. Sinonasal mass (SNM) is a common finding in the ENT department. It is found in almost all age groups of people. A variety of mass lesions occur within the PNS and nasal cavity and thus it becomes mandatory for otorhinolaryngologist to elicit detailed history of all cases of SNM and perform thorough examination before reaching a final diagnosis. Otorhinolaryngologist must keep in mind all the possibilities pertaining to differential diagnosis of SNM. The patient will experience nasal polyp to be unpleasant disease which severely interferes with the quality of life¹. Classically they are caused by combination of allergy and infection². The prevalence rate of nasal polyp is about 2%³.**Material & Methods****Source of Data**

This was a prospective study on patients attending the outpatient department of ENT in Sardar Patel Medical College Bikaner.

Sample size : 100

Duration of study : 1 year

Method of Collection of Data

Detailed history was taken followed by clinical examination, radiological assessment and pathological evaluation and diagnosis was arrived. Following definitive diagnosis patients were managed accordingly.

Inclusion Criteria

Patient with mass in sinonasal cavity and nasopharynx

Exclusion Criteria

- Adenoids
- Patients who underwent surgery for same problem

Investigations or Interventions Was Conducted On Patients

Routine blood and urine examination

- Hemoglobin percentage
 - Blood grouping and Rh typing
 - Total leukocyte count
 - Differential leukocyte count
 - Erythrocyte sedimentation rate
 - Random blood sugar
- Bleeding time
- Clotting time
- Prothrombin time
- Partial thromboplastin time
- Platelet count
- HIV 1 & 2
- HBsAg
- Urine
 - Albumin
 - Sugar
 - Microscopy
- X-ray paranasal sinuses – water’s view
- CT scan – nose and paranasal sinuses
- Nasal endoscopy
- Culture and sensitivity of discharge from nasal cavity and histopathological examination of biopsy taken from masses.
- The following investigations were done depending upon the individual cases.
- Absolute eosinophilic count
- Magnetic resonance imaging

Observation

This is a prospective study done on 100 patients attending the outpatient department of ENT in Sardar Patel Medical College Bikaner. Detailed history was taken followed by clinical examination, radiological assessment and pathological evaluation and diagnosis was arrived. Following definitive diagnosis patients were managed accordingly.

Table 1.Age wise distribution of cases

Age groups (yrs)	Number of cases	Percentage
10-20 yrs	17	17%
21-30 yrs	25	25%
31-40 yrs	20	20%
41-50 yrs	20	20%
51-60 yrs	11	11%
61-70 yrs	5	5%
>70 yrs	2	2%
Total	100	100%

The above table depicts that the majority of cases (65%) were seen in 21-50 years of age group. Minimum patients were seen in above 50 years of age. Overall, the mean age of patients was 37.46 years.

Table 2.Gender wise distribution of cases

Gender	Number of cases	Percentage
Male	68	68%
Female	32	32%
Total	100	100%

In the present study, the male & females were estimated 68% and 32% respectively. Male to female ratio was 2.12:1.

Table 3.Clinical profile of cases

Symptoms & Sign	Number of cases	Percentage
Nasal Discharge	72	72%
Nasal obstruction	70	70%

Sneezing	41	41%
Alteration in smell	41	41%
Sinus tenderness	37	37%
Headache	33	33%
Bleeding per nasal	26	26%
Post nasal drip	28	28%
Swelling of face	19	19%
Proptosis	11	11%
Ear discharge	10	10%
Epiphora	6	6%
Palatal bulge	1	1%
Change in voice	1	1%

The above table depicts that the clinical profile of patients. 72% patients complaining of nasal discharge followed by 70% nasal obstruction, 41% cases each have sneezing & alteration in smell, 37% sinus tenderness, 28% cases have post nasal drip, 26% bleeding per nasal, 19% swelling of face, 10% ear discharge, 6% epiphora and only one case each have palatal bulge & change in voice.

Table 4.Nasal endoscopic findings

Nasal endoscopic findings	Number of cases	Percentage
Unilateral nasal mass	40	40%
Bilateral nasal mass	60	60%
Bleeding on touch	2	2%
Deviated nasal septum	12	12%
Turbinate hypertrophy	6	6%

In present study showed that the 60% had bilateral nasal mass followed by 40% had unilateral mass, deviated nasal septum was present in 12% cases, 6% turbinate

hypertrophy and only 2% had bleeding on touch in nasal endoscopic findings.

Table 5.Clinical diagnosis of cases

Clinical diagnosis	Number of cases	Percentage
Inflammatory tumor like mass		
Nasal polyp	64	64%
Sinusitis	19	19%
Rhinospordiosis	4	4%
Rhinolith	2	2%
Allergic Fungal Rhinosinusitis	1	1%
Benign lesions		
Angiofibroma	5	5%
Haemangioma	2	2%
Inverted papilloma	3	3%

The above table depicts that the in inflammatory tumor like mass, most commonly seen as nasal polyp (64%) followed by 19% sinusitis, 4% rhinospordiosis, 2% rhinolith and only one case had allergic fungal rhinosinusitis.

In benign lesion, angiofibroma was most common (5%) followed by inverted papilloma (3%) and 2% had haemangioma.

Discussion

The goal of clinic-pathological study of masses in sinonasal cavity and nasopharynx has evolved from removing all pathological masses and relieve the obstruction for restoring maximum possible function. The clinic-pathological study also gives the valuable information about the possibility of changing a benign lesion into malignant lesion.

The majority of cases (65%) were seen in 21-50 years of age group. Minimum patients were seen in above 50 years of age. Overall, the mean age of patients was 37.46 years. Similar results found with Bakari et al⁴ found majority of

the patients were in the age groups 21-50 yrs (mean age was 33.3 years). Another study done by Khan et al⁵ found mean age was in non-neoplastic (22.5 years), benign tumors (26.8 years) and malignant tumors (35.3 years). M Kulkarni et al⁶ found common age group is second and third decades.

Various study done by Thompson and Gyure⁷ found mean age was 47.6 yrs, Thompson et al⁸ mean age was 64.3 years and Díaz Molina et al⁹ found that the average age was 58 years (range 22-80) which were slightly higher than our study.

Male to female ratio was 2.12:1 in our study, similar results found with Díaz Molina et al²⁰, M Kulkarni et al⁶ and Choi et al¹⁰.

The clinical profile of patients which 72% patients complaining of nasal discharge followed by 70% nasal obstruction, 41% cases each have sneezing & alteration in smell, 37% sinus tenderness. Similar with various study done by Thompson and Gyure⁷ and Thompson et al⁸ (2003).

In present study showed that the 60% had bilateral nasal mass followed by 40% had unilateral mass, deviated nasal septum was present in 12% cases, 6% turbinate hypertrophy and only 2% had bleeding on touch in nasal endoscopic findings, similar findings with Bakari et al⁴ was bilateral (44.7%).

Most commonly inflammatory tumor like mass seen as nasal polyp (64%) followed by 19% sinusitis and angiofibroma was most common (5%) benign lesion.

Bakari et al⁴ found commonest clinical diagnoses were simple nasal polyp 47(61.8%) and antrochoanal polyp 10(13.2%).

Conclusion

Most of the cases in present study presented with 72% patients complaining of nasal discharge followed by 70%

nasal obstruction, 41% cases each have sneezing & alteration in smell, 37% sinus tenderness.

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