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A comparative study of the distribution of sino nasal and nasopharyngeal lesions over a period of two years at a government general hospital

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Abstract: *introduction ; lesions of nasal cavity,para nasal sinuses, nasopharynx manifest as a diverse range of lesions. Hence a review is undertaken,Objectives ; to study the distribution of sinonasal and naso pharyngeal lesions.Methology ; this study is conducted over a period of 2 years.Results; a total of 120 cases were studied, of these 82 were non neoplastic, 27 were benign tumors,11 cases were malignant.Conclusion; allergic and inflammatory polyps were the most common. Benign tumors were hemangiomas and schnederianpapillomas. Malignant tumors were very less.*

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I. Introduction

Majority of the lesions of the nasal cavity tend to be polypoid. Nose and sinuses are exposed to a variety of infections, chemicals,traumatic ,mechanical and antigenetically stimulating influences. So as a consequence there are formations of tumor like lesions and tumors.[4]

Sinonasal polyps are inflammatory swellings of the nasal mucosa, appear as rounded projections of edematous membrane. Nasal polyps are the most common group of mass lesions associated with multifactorial etiologies ;infectious, non infectious, inflammatory, anatomic and genetic abnormalities. incidence of nasal polyps is 1-4% in the general population.

The presenting symptoms of all masses are similar i.e nasal obstruction , rhinorrhea, blood stained discharge, epistaxis, facial swelling. Carcinomas make upto0.2-0.8% of all malignancies.malignant lesions have low incidence, long clinical history and frequent local recurrence with high morbidity.

II. Material and methods

A total of 120 specimens, both endoscopic biopsies and excision biopsies were examined. All the specimens were routinely processed and stained with H&E. special stains like PAS and GMS were done for fungal elements.

III. Results

Among 120 specimens Non neoplastic were 82(68.3%), benign were 27(22.5%), malignant were 11(8.2%). Among non neoplastic lesions inflammatory polyps were 46((32.3%), capillary hemangiomas were14 (11.7%), allergic polyps were 12 (10 %), rhinoscleromas 8(6.7%), schnederianpapillomas 8(6.7%), rhinosporidiosis were 6 (5%), tuberculosis 4 (3.3%), aspergillosisand mucor mycosis each3(2.5%), angiofibroma4 (3.3%), adenoid cystic carcinoma 2(1.7%),squamous cell carcinoma5(4.2%), ameloblastic carcinoma, mucoepidermoid carcinoma , olfactory neurobastoma, schwannoma and plasmacytoma one case each (0.8%).(table1).

Table 1; distribution of study subjects according to the histological diagnosis.

Histological diagnosis	No	Percent
Inflammatory polyp	46	38.3
Capillary hemangioma	14	11.7
Allergic polyp	12	10
Rhinoscleroma	8	6.7
Schnederian papilloma	8	8.7
Rhinosporidiosis	8	6.7
Tuberculosis	4	3.3
Angio fibroma	4	3.3
Aspergillosis	3	2.5
Mucormycosis	3	2.5

Keratinizing Sq cell ca of PNS	2	1.7
Adenoid cystic carcinoma	2	1.7
Plasmacytoma	1	0.8
Nasopharyngeal keratinizing scc	1	0.8
Non keratinizing SCC of nasal cavity	1	0.8
Non keratinizing SCC ofnasopharynx	1	0.8
Ameloblastoma	1	0.8
Mucoepidermoid carcinoma	1	0.8
Olfactory neuroblastoma	1	0.8
Schwannoma	1	0.8

IV. Discussion

Nasal polyps are the most commonly encountered nasal masses.Hence we chose to compare our statistics with other studies.

Present study includes 120 specimens of patients presenting with masses arising from nasal cavity, para nasal sinuses and nasopharynx over a period of 2 years. Out of 120 lesions ,82(68.3%) were non neoplastic, 38(31.7%) were neoplastic, of these 27(22.5%) were benign, and 11 (9.2%) were malignant. In a study conducted by Bist SS et al.9[2]60% were non neoplastic,19.8% were benign and 23.76% were malignant lesions. In Jyothi Raj et al.[3] 's study,67.21%were non neoplastic,32.79%were neoplastic. Out of neoplastic lesions,60%were benign, and 40% were malignant. In AlpanaBanaerjee et al.study,[4]62.42% were non neoplastic,28.19% were benign, and 9.39% were malignant tumors lesions. In V.Manikanta et al.[5]study,93.2% were non neoplastic,2.98%were benign and 3,82% were malignant lesions. The present study is close to Jyothi A Raj et al. study.

SINONASAL POLYPS:

Sinonasalpolyps were 70.7% (58 cases) among the non neoplastic lesions and 48.33% out of all one twenty cases.Most of the cases were in the 3rd decade with male predominance.In Kulkarni MA et al [6] it is 69.35%, in Dasgupta et al.[7] study is 62.85%,which are close to the present study.

RHINOSCLEROMA:

Among 82 cases of non neoplastic lesions, it represents 9.8% (8 cases) and 6.7% among total 120 cases .Most of them were in 3rd decade with female predominance. The percentage of rhinoscleroma in various other studies is as follows,InMaru AM et al.[8]study (8%),SeemaBjjaragi et al.[9] study (3.92%) The present study is similar to Maru AM etal.study.

RHINOSPORIDIOSIS:

Among 82 cases of non neoplastic lesions, Rhinosporidiosis cases represent 7.3%(6 cases) and 5% among total 120 cases .Most of the cases were in 3rd decade with male predominance.InAlpana Banerjee et al [4]study it is (0.7%) among non neoplastic lesions which is close to the present study.

TUBERCULOUS LESIONS:

Among 82 cases of non neoplastic lesions ,they represent 4.9%(4 cases) and 3.3% among total 120 cases .In Zafar U et al study[10] it is (4.14%)among non neoplastic lesions and the present study is in concurrence with this study.

MUCORMYCOSIS:

Among 82 cases of non neoplasticlesions ,Mucormycosis represents 3.7%(3 cases) and 2.5% among total 120 cases , majority were in 3rd decade with male predominance.This is nearer toMaru AM et al 's.[8] study(4%).

ASPERGILLOSIS:

Among 82 cases of non neoplastic lesions , these represent3.7%(3 cases) and 2.5% among total 120 .Most of them were in 6th decade with male predominance.InMaru AM et al. [8]study it is(4%)- in concurrence with present study.

CAPILLARY HEMANGIOMA:

Among 27 cases of benign lesions,these cases account for 51.9%(14 cases) and 11.7% among total 120 cases.InAlpana Banerjee et al.[4]study (57.14%),Kulkarni M A et al. [6] study (38.46%),respectively.The present study is correlating with Alpana Banerjee et al.study .

SCHNEDERIAN PAPILLOMA:

Among 27 cases of benign lesions,Schnederian papilloma cases represent 29.6%(8 cases) and 6.7% among total 120 cases.Majority were in 2nd decade with male predominance.InParajuli S et al .[11]study it is(31.57%)and Asha Satvara et al [12]study(33%) respectively.The present study statistics are nearer to Parajuli S et al .study.

ANGIOFIBROMA:

Among 27 cases of benign lesions,thesecases contributed to 14.8%(4 cases)3.3% among total 120 cases .In Dinesh Garg et al[13]study, ,V.Manikanta et al.study the occurance of Angiofibroma is 18.18%,14.3%. The present study is concurrence with Dinesh Garg et al study.

SCHWANNOMA:
Among 27 cases of benign lesions,Schwannoma represents 3.7% (1 case) and 0.8%among total 120 cases .Only one case was observed in the present study seen in 46 year old female.InKulkarni M A et al.[14]study(7.69%),Dinesh Garg et al study(18.18%) among benign lesions , respectively which is not correlating with present study.
SQUAMOUS CELL CARCINOMA:
It represents 4.2% of total 120 lesions , 13.15% of total neoplastic lesions and 45.45% of malignant lesions and the predominant age group 5th and 6thdecade.In other studies the incidence of SCC in Kulkarni etal(66.6%) , Jyothi Raj etal (50%)The present study is approximately correlating with Jyothi Raj etalet al study.
ADENOID CYSTIC CARCINOMA:
Among 11 malignant lesions,2 cases were adenoid cystic carcinoma representing 1.6% of total 120 lesions of the present study,5.26% of total neoplastic lesions and 18.18% of malignantlesions,with equal incidence among male and female,the incidence of adenoid cystic carcinoma in Jyothi A Raj et al. (12.5%),Dasgupta et al is (19.5%).The present study statistics are in concordance with Dasgupta et al study.
OLFACTORY NEUROBLASTOMA:
Among 11 malignant lesions, 1 case was Olfactory neuroblastoma representing 0.8% of of total 120 lesions ,2.63% of total neoplastic lesions and 9.09% of malignant lesions,it was seen in 56 years male involving the maxillary sinus .According to other studies incidence of Olfactory neuroblastoma are Alpana Banerjee et al.[4] (28.57%),MaruA M et al [8](16.66%),Parajuli S et al, [11](10%).The present study is nearer to Parajuli S et al study.
AMELOBLASTIC CARCINOMA:
Among 11 malignant lesions,only 1 case was ameloblastic carcinoma representing 0.8% of total 120 lesions ,2.63% of total neoplastic lesions and 9.09% of malignant lesions.It was seen in 63 years male patient .
MUCOEPIDERMOID CARCINOMA:
Among 11 malignant lesions,Mucoepidermoid carcinoma cases contributed about 9.09%(1case). And 0.8% among 120 cases of sinonasalmasses , which was seen in a 45 year old male patient .In Nadia Shirazi et al[15]study it is (0.6%) among total lesions and the present study is in concurrence with Nadia Shirazi et al study.
PLASMACYTOMA:
Among 11 malignant lesions,Plasmacytoma cases represented 9.09%(1case) and 0.8% among 120 cases observed in a 39 year old male patient.Incidence of this lesion in other studies is ,In Dinesh Garg et al study[13](0.68%),In Modh S K et al study[16](0.62%) and in Nadia Shirazi et al study[15]0.32%) among total lesions and the present study is in concurrence with Dinesh Garg et al and Modh S K et al study.
Conclusion; the present study mainly highlights the prevalence of lesions of nasal cavity,paranasal sinuses and nasopharynx. It includes a small sample size of 120 cases, may not accurately reflect the original incidence.

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