Section: Pathology

Original Research Article

HISTOPATHOLOGICAL STUDY OF MASSES IN THE NASAL CAVITY AT TERTIARY CARE HOSPITAL

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ABSTRACT

Background: To study the pathology of various non neoplastic and neoplastic lesions of nasal cavity.

Materials and Methods: The study was conducted at Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram during the period from December 2020 to May 2022. Sample size: 50 patients Prior approval obtained from ethical committee. The present study includes cases of sinonasal masses presented to ENT department.

Results: A total of 60 Nasal endoscopic biopsy specimens and excision specimens of sinonasal masses were analyzed by histopathological examination. Out of total 60 cases of sinonasal masses. 49 (74.4 %) were non neoplastic lesions. 11 (25.6 %) were neoplastic lesions. 39(65 %) cases were non specific non neoplastic lesions. 10 (16.6%) were specific non neoplastic lesions. 10 (16.6 %) cases were non specific inflammatory polyps. 29 (48.4 %) were allergic polyps. Distribution of non-neoplastic - specific cases includes Rhinosporiodiosis 6 cases (10 %), Mucormycosis 2 cases (3.4 %), Aspergillosis 1 case (1.6 %) and Tuberculous granuloma 1 case (1.6 %). The present study found that Benign neoplastic lesions 8 (13.1 %) cases, Schneiderian papilloma 4 cases (6.6%)., Pleomorphic adenoma 2 cases (3.3%), Haemangioma 1 cases (1.6%) and Schwannoma 1 case (1.6 %).

Conclusion: We concluded that histopathological evaluation is mandatory in all cases of nasal masses for accurate diagnosis. In certain cases such as Undifferentiated carcinomas, immunohistochemistry became the ultimate diagnostic technique, so that a correct and timely intervention can be made for patient management.

Keywords: Neoplastic lesions, Mucormycosis, Immunohistochemistry, Carcinomas, Benign lesions.

INTRODUCTION

By virtue of anatomic and histologic diversity in nasal cavity, presented with a variety of non-neoplastic and neoplastic lesions. They are very common lesions encountered in clinical practice, most of them presented with nasal polypoidal mass.[1]

Due to unusual clinicopathological presentations, lesions of nasal cavity, nasopharynx and paranasal sinuses showed difficulty in their diagnosis, prognosis and management. Clinical symptoms of neoplasms of nose and paranasal sinuses often mimicsas chronic inflammatory condition.[2]

Majority of the neoplastic lesions in nasal cavity have tendency to become polypoid. Such as epithelial papilloma of nasal cavity often present as a nasal polyp. Even more dangerous is nasal glioma which may present as a polypoidal lesion, we often mistake it forinflammatory polyp.[2]

Word polyp means “many footed” (polypous) which came from Greek, first described more than 3000 years ago.[3] Nasal polyps is non neoplastic inflammatory swellings of the nasal mucosa appeared as rounded projections of edematous membrane.[4]

Nasal polyps most common group of mass lesions encountered with multifactorial disease with infectious, noninfectious, inflammatory, anatomic and genetic abnormalities.[5] Incidence of nasal polyps is 1 - 4% in general population.[6]

In the neoplastic lesions, benign tumors is more frequent than malignant tumors.1 Schneiderian papillomas and squamous cell carcinomas is the commonest among benign and malignant tumors respectively. Incidence of Schneiderian papillomas is less than 5% of all sinonasal tumors.

Carcinomas of nasal cavity and account for 0.2-0.8% of all malignant neoplasms and Squamous cell carcinoma represents 3% of all head and neck neoplasms.[6] Incidence of nasal squamous cell carcinoma is 1 per 100,000 populations worldwide.

The malignant neoplasms have extremely low incidence with a long clinical historyand frequent local recurrence with high morbidity.[2] Nasal tract masses can be difficult to diagnose as they have unusual diverse morphology and histopathology with anatomic and embryonic distinction.[7]

Nasal undifferentiated carcinoma is a high grade clinicopathologically distinctive malignant epithelial neoplasm of uncertain histogenesis with or without neuroendocrine differentiation but without evidence of squamous or glandular differentiation.

Special staining such as PAS, Mucicarmine will be very helpful in the diagnosis of fungal infections, Rhinosporidiosis, Adenocarcinoma and Adenoid cystic carcinomas.

By Clinical, radiological and endoscopic modalities, it is impossible to distinguish simple nasal polyps from neoplastic polypoidal lesions. Histopathology is the mainstay of definitive diagnosis. For this reason, it becomes important that all polyps and polypoidal lesions of nose should be submitted for histopathogical examination and special stains such as PAS, Alcian blue and immunohistochemical markers were used wherever necessary.

Aim of the study

1. To study the pathology of various non neoplastic and neoplastic lesions of nasal cavity.
2. To study the frequency and distribution of various non neoplastic and neoplastic lesions of nasal cavity.
3. To study the rare and unusual lesions of nasal cavity.

MATERIAL AND METHODS

Place of Study: Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram.

Study period: 18 months (December 2020 to May 2022)

Sample size: 50 patients

Ethical committee clearance: Prior approval obtained from ethical committee.

Inclusion Criteria

- Cases of sinonasal masses presented to ENT department.
- Primary lesions of nasal cavity and paranasal sinuses confirmed with diagnostic nasal endoscopy.
- All age groups were included.

Exclusion Criteria

- Lesions of nasal skin.
- Lesions of vestibule of nose, as these tumors probably were related more to skin primary tumors than to nasal carcinoma.
- Secondary invasion (metastasis) of the sinuses and nasal cavity.
- Recurrence cases after Radio therapy / Chemotherapy.

Specimen Collection

Nasal endoscopic biopsy specimens and excisionspecimens were collected in 10% formalin solution.

Specimen Processing

- Fixatation Specimens collected in 10% formalin solution were allowed to fixed upto 14 to 18 hours.
- Macroscopic examination
- Number of specimens - single/ multiple
- Measurement in three dimensions
- Colour and appearance
- Consistency
- Cut surface – solid / cystic, haemorrhage and necrosis
- Tissues were processed for paraffin embedding.
- Cut into thin sections of 4-5 microns.
- Sections are stained with Haematoxylin and Eosin stain.
- Light microscopic examination
- Surface epithelium: Squamous / Respiratory / Transitional, Metaplasia& Ulceration.
- Mucous glands: Present / Absent / Hyperplastic.
- Stroma: Edema, Vasculature, Inflammatory cells& Dysplasia.
- Tumor cell type – epithelial / soft tissue / neuro endocrine/ odontogenic / bone/ cartilage / haemato lymphoid and Pattern, Nuclei& Cytoplasm.

SPECIAL STAINS

PERIODIC ACID SCHIFF (PAS) STAINING

PAS staining was done for special cases such as fungal sinonasal mass -Aspergillus, Mucor, Rhinosporidiosis and Adenocarcinoma (mucin).

Procedure

Deparaffinize the tissue sections. Bringsections to distilled water.

Treat with periodic acid for 5 minutes. Rinse well in distilled water.

Cover with Schiff's reagent for 5-15 minutes. Wash inrunning tap water for 5-10 minutes.

Counter stain with Harri's hematoxylin for approximately 15 seconds. Differentiate (if necessary) with acid alcohol and bluing as usual.

Wash in tap water.

Rinse in increasing concentration of alcohol (70, 80, 95 and 100%). Clear inxylene and mount as usual.

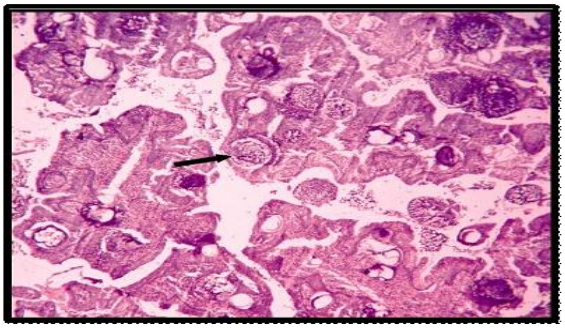

Figure 1: RHINOSPORIDIOSIS H& E SECTION showing numerous sporangium filled with endospores

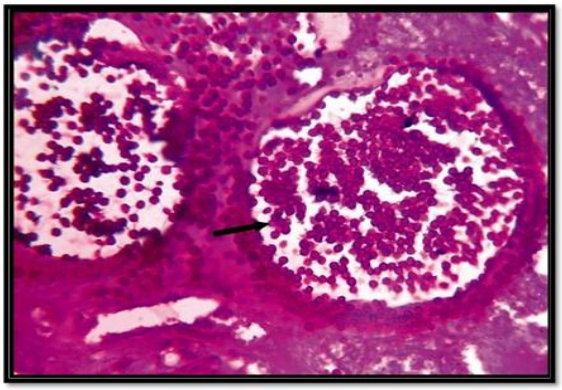

Figure 2: RHINOSPORIDIOSIS PAS SECTION (100X) showing positivity of endospores for PAS

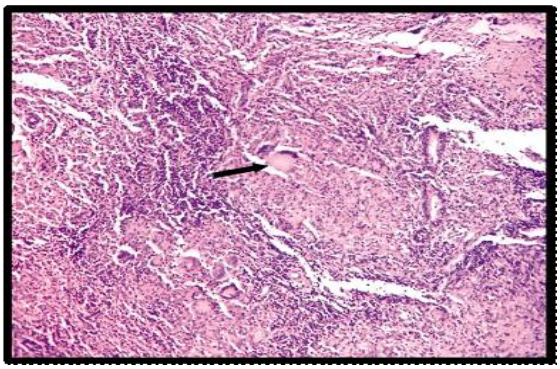

Figure 3: TUBERCULOUS GRANULOMA H& E SECTION (with lymphocytic infiltration and Langerhan showing giant cells).

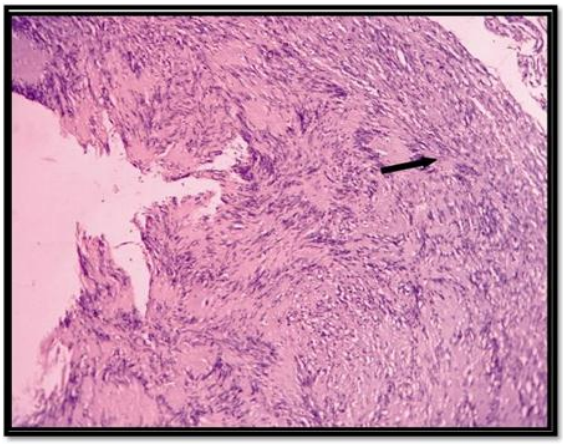

Figure 4: SCHWANNOMA H& E SECTION (400X) showing Antoni A, Antoni B areas and verocay bodies

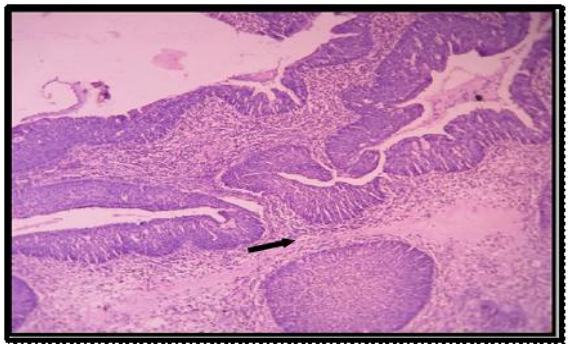

Figure 5: INVERTED PAPILLOMA H& E SECTION showing endophytic growth of multilayered nonkeratinizing squamous epithelial cells.

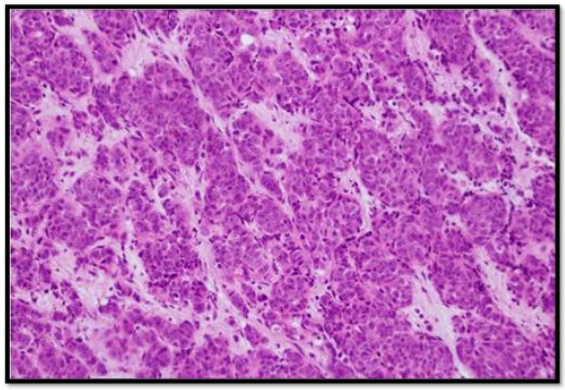

Figure 6: Sinonasal undifferentiated carcinoma Nests, lobules, trabeculae and sheets of medium sized cells

RESULTS

Analysis of Cases

During the study period from December 2020 to May 2022 a total number of 60 specimenns from patients having sinonasal mass were referred from ENT department, Malla Reddy Medical College, Suraram. All samples were processed and analyzed in Pathology department for histopathological evaluation.

Table 2 states that out of 49 cases of non-neoplastic lesions, 39 (65%) cases were nonspecific non neoplastic lesions, 10(16.6%) were specific nonneoplastic lesions. [Table 2]

Table 3 states that out of 39 cases of nonspecific non neoplastic lesions, cases 10 were nonspecific inflammatory polyps (NSIP) and were 29 allergic polyps. NSIP contributes about 25.7 % among total 60 cases of sinonasal masses, 46.2 % among 93 cases of nonspecific non neoplastic lesions. Allergic polyps contribute about 48.4 % among total 60 cases of sinonasal masses, 74.3 % among 39 cases of nonspecific non neoplastic lesions. [Table 3]

Table 4 states that out of 10 cases of specific non neoplastic lesions, rhinosporiodiosis contributes of 6 cases, 10% among total 60 cases of nasal masses, 60 % among specific non neooplastic lesions. mucormycosis contributes of 2 cases, 3.4 % among total 60 cases of sinonasal masses, 15.5 % among specific non neoplastic lesions. aspergillosis contributes of 1 cases, 1.6 % among total 60 cases of

nasal masses, 3.8 % among specific non neoplastic lesions. Tuberculous granuloma contributes of 1 cases, 1.6 % among total 60 cases of nasal masses, 3.8 % among specific non neoplastic lesions. [Table 4]

Table 5 states that out of 11 neoplastic lesions, 8 (13.3 %) cases were benign neoplastic lesions, 3(5 %) cases are malignant neoplastic lesions. [Table 5]

Table 6 states that out of 8 benign neoplastic lesions schneiderian papilloma (inverted papilloma) were 4 cases, which represents 6.6% among total 60 sinonasal masses,36.6% among neoplastic lesions and 38.5% among benign neoplastic lesions.

Out of 8 benign neoplastic lesions pleomorphic adenoma were 2 cases, which represents 3.3% among total 60 sinonasal masses, 18.8 % among neoplastic lesionsand 15.4 % among benign neoplastic lesions.

Out of 8 benign neoplastic lesions haemangioma were 1 cases, which represents 1.6% among total 60 sinonasal masses, 9.0 % among neoplastic lesions and 7.7 % among benign neoplastic lesions. [Table 6]

Out of 8 benign neoplastic lesions schwannoma was 1 case, which represents 1.6 % among total 60 sinonasal masses, 9 % among neoplastic lesions and 7.7 % among benign neoplastic lesions.

Table 7 states that Out of 3 malignant neoplastic lesions naso pharyngeal pigmented basal cell carcinoma is 1 cases, which represents 1.6% among total 60 sinonasal masses, 9 %among neoplastic lesions and 33.3 % among malignant neoplastic lesions.

Out of 3 malignant neoplastic lesions moderatly differentiated squamous cell carcinoma is 2 casse, which represents 3.3 % among total 60 sinonasal masses, 18.8 %among neoplastic lesions and 66.6 % among malignant neoplastic lesions.

Table 10 gives information about age wise distribution in percentage among non neoplastic-specific cases of Rhinosporiodiosis, Mucormycosis, Aspergillosis and Tuberculous granuloma respectively. [Table 10]

Table 1: Distribution of total Cases

DIAGNOSIS	TOTAL CASES	PERCENTTAGE
NON NEOPLASTIC	49	81.6 %
NEOPLASTIC	11	18.3%
TOTAL	60	100%

Table 2: Distribution of Non Neoplastic Cases

DIAGNOSIS	TOTAL CASES	PERCENTTAGE
NON SPECIFIC NON NEOPLASTIC	39	65%
SPECIFIC NON NEOPLASTIC	10	16.6%
TOTAL	49	81.6%

Table 3: Distribution of non neoplastic - non specific cases

DIAGNOSIS	NUMBER OF CASES	PERCENTAGE/ TOTAL	P ERCENTAGE/ NONSP.NON NEOPLASTIC
Non specific Inflammatory polyp	10	16.6%	25.7%
Allergic polyp	29	48.4%	74.3%
TOTAL	39	65%	100%

Table 4: Distribution of non neoplastic - specific cases

DIAGNOSIS	NUMBER OF CASES	PERCENTAGE / TOTAL	PERCENTAGE / SPECIFIC.NON NEOPLASTIC
Rhinosporiodiosis	6	10%	60%
Mucormycosis	2	3.4%	20%
Aspergillosis	1	1.6%	10%
Tuberculous granuloma	1	1.6%	10%
TOTAL	10	16.6%	100%

Table 5: Distribution of neoplastic cases

DIAGNOSIS	TOTAL CASES	PERCENTAGE
NEOPLASTIC BENIGN	8	13.3%
NEOPLASTIC MALIGNAANT	3	5%
TOTAL	11	18.3%

Table 6: Distribution of benign neoplastic cases

DIAGNOSIS	NUMBER OF CASES	PERCENTAGE / TOTAL	PERCENTAGE /NEOPLASTIC	PERCENTAGE / BENINGN
Sch.papilloma	4	6.6%	36.6%	57.1%

Pleo.adenoma	2	3.3%	18.8%	28.5%
Hemangioma	1	1.6%	9.0%	14.2%
Schwannoma	1	1.6%	9.0%	14.2%

Table 7: Distribution of malignant neoplastic cases

DIAGNOSIS	NUMBER OF CASES	PERCENTAGE / TOTAL	PERCENTAGE / NEOPLASTIC	PERCENTAGE / MALIGNANT
Pigmentedbasalcell carcinoma	**1**	**1.6**	**9.0**	**33.3**
Moderately differentiated sq.cell.ca	**2**	**3.3**	**18.8**	**66.6**

Table 8: Age & Sex distribution of Sino nasal mass

AGE	NN		NB		NM		Total
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
0-10	1	0	0	0	0	0	1
11-20	1	1	0	0	0	0	2
21-30	3	3	1	0	0	0	7
31-40	9	5	1	1	0	0	16
41-50	8	5	1	2	0	0	16
51-60	5	3	0	1	1	0	10
61-70	4	1	0	1	0	1	7
71-80	0	0	0	0	1	0	1
TOTAL	31	18	3	5	2	1	60

Table 9: Age distribution of non neo plastic- non specific cases

AGE	Non specific inflammatory polyp		Allergic polyp	
	NUMBER OF CASES	PERCENTAGE / NSIP	NUMBER OF CASES	PERCENTAGE/AP
0-10	1	2.3%	1	2%
11-20	9	20.9%	9	18%
21-30	9	20.9%	11	22%
31-40	8	18.4%	14	28%
41-50	9	20.9%	8	16%
51-60	3	6.9%	4	8%
61-70	4	9.2%	3	6%
71-80	-	-	-	-

Table 10: Age distribution among Non Neoplastic - Specific cases

Age	Rhinosporiodiosis		Mucormycosis		Aspergillosis		Tuberculous granuloma	
	cases	%	cases	%	cases	%	Cases	%
0-10	-	-	-	-	-	-	-	-
11-20	-	-	-	-	-	-	-	-
21-30	1		-	-	-	-	-	-
31-40	2		1		-	-	-	-
41-50	2		-	-	-	-	1	
51-60	1		1		1		-	-
61-70	-		-	-	-	-	-	-
71-80	-	-	-	-	-	-	-	-

DISCUSSION

The lesions of sinonasal region display a complex and interesting spectrum of histopathologic features. Most of them present as polypoid masses and is almost impossible to distinguish clinically; they are simply labeled as "nasal polyps". It may be due to most frequently occurring simple nasal polyps or polypoidal lesions due to infective, inflammatory, granulomatous disease, neoplasms including malignant ones. The majority of sinonasal pathology is inflammatory, with neoplasms comprising approximately 3% of head and neck tumors.8 Histopathologic categorization is essential in the management of these lesions.[1]

In this study 60 Nasal endoscopic biopsy specimens and excision specimens of sinonasal masses were analyzed by histopathological examination. Among 60 cases studied 49 (81.6%) were non neoplastic and 11 (18.3%) were neoplastic lesions (Table 1). Hemant chopra et al, in their study 84 % were non neoplastic and 16%were neoplastic lesions.9 Seema et al in their study 67 % were non neoplastic and 33%were neoplastic lesions.[10]

Among 49 cases of non neoplastic lesions, 39(65 %) cases were non specific non neoplastic lesions, 10 (16.6%) were specific non neoplastic lesions (Table 2 & Figure 2). Aparna et al, in their study 70 % cases were non specific non neoplastic lesions, 30% were specific non neoplastic lesions.[11]

Among 11 cases of neoplastic lesions, 8 (13.3 %) cases were benign neoplastic lesions,3 (5 %) cases were malignant neoplastic lesions (Table 5).

Aparna et al, in their study 11% cases were benign neoplastic lesions, 2% cases were malignant neoplastic lesions. Dinesh et al, in their study 7.4% cases were benign neoplastic lesions, 8.8 % cases were malignant neoplastic lesions.[12] Alpesh .M. Maru et.al, in their study 0% cases were benign neoplastic lesions,8.5 % cases were malignant neoplastic lesions. Alpana Banerjee et al, in their study 28.1 % cases were benign neoplastic lesions, 9.3 % cases were malignant neoplastic lesions.[13] Pushpalatha K, in her study 28.7 % cases were benign neoplastic lesions,7.1 % cases were malignant neoplastic lesions.[14] Bist S, in his study 19.8 % cases were benign neoplastic lesions, 23.7 % cases were malignant neoplastic lesions.15 Jyothi A Raj et al in their study 19.6% cases were benign neoplastic lesions, 13% cases were malignant neoplastic lesions.[1] Lathi.A et al in their study 16.9 % cases were benign neoplastic lesions, 11.6% cases were malignant neoplastic lesions.[16] Hemant chopra et al, in their study 11 % cases were benign neoplastic lesions, 5% cases were malignant neoplastic lesions.[9] Seema et al, in their study 22.2 % cases were benign neoplastic lesions, 9.8% cases were malignant neoplastic lesions.[10]

NON SPECIFIC INFLAMMATORY POLYP (NSIP):

Among 39 cases of non specific non neoplastic lesions, NSIP contributes about 25.7 % (10 cases), 16.6 % among total 60 cases of sinonasal masses. Mostof the cases occur in the age groups of 11-20 yrs 3 cases, 21-30 yrs 3 cases, 41-50 yrs 4 cases. four cases are males and five cases are females.

Histologically characterized by edematous fibrous tissue, sparse fibres with accumulation of fluid, diffuse cellular infiltration consisting of lymphocytes, plasmacytes, polymorphonuclear leukocytes and histiocytes with absence of eosinophils. Hyalinised thick basement membrane was also noticed.[4]

ALLERGIC POLYPS

Allergic polyps contribute about 48.4 % (29 cases) among total 60 cases of nasal masses, 74.3 % among 39 cases of non specific non neoplastic lesions. Most of the cases occur in the age groups of 31-40 yrs (28%), totally eight cases. Four cases were males and twenty-four cases were females (1:1).

Histologically characterized by replacement of ciliated cells of surface epithelium by large goblet cells, mucous glands become hyperplastic and distended with prominent hyalinization of basal lamina. Stroma infiltrated with abundant eosinophils.[17]

RHINOSPORIODIOSIS

Rhinosporiodiosis contributes of 6 cases, 10% among total 60 cases of nasal masses, 60 % among specific non neoplastic lesions. Most of the cases occur in the age groups of 31-40 yrs (23%),41-50 yrs (23%), 3 cases each. Four cases were males and two cases were females (3:1).

Histologically characterized by presence of cysts of varying sizes in which mature cyst are called sporangium contains hundreds of endospores, surface epithelium is hyperplastic and beneath which chronic inflammatory infiltrates and foreign body giant cells are seen around the sporangium.[18,19]

MUCORMYCOSIS

Mucormycosis contributes of 2 cases, 3.4 % among total 60 cases of sinonasal masses, 20 % among specific non neoplastic lesions. one case is males and one case was female Histologically characterized by broad aseptate fungal hyphae with wide angle and with or without sporangia. The lesion consists of inflammatory granulation tissue with infiltration of polymorphonuclear leucocytes histiocytes, foam cells and multinucleated giant cells and areas of haemorrhage and necrosis.[20, 21]

ASPERGILLOSIS

Aspergillosis contributes of 1 case, 1.6 % among total 60 cases of nasal masses, 10 % among specific non neoplastic lesions. Affected case was 52-year-old male. Histologically characterized by fungal ball and allergic fungal sinusitis are distinguished from fungal ball by the distribution of organisms scattered in case of allergic fungal sinusitis and colony forming in case of fungal ball.[21]

TUBERCULOUS GRANULOMA

Tuberculous granuloma contributes of 1 case, 1.6 % among total 60 cases of nasal masses, 10 % among specific non neoplastic lesions. Affected case is 43-year-old female.

Histologically characterized by tubercles with Langhans type giant cells in fibrotic granulation tissue with aggregates of epithelioid cells and peripheral lymphocytes forming well circumscribed granuloma and caseating necrosis.[22]

BENIGN LESIONS

Schneiderian papilloma (Inverted papilloma):

Among 8 benign neoplastic lesions, this constitutes about 6.6% (4 cases). three cases were males and one cases is females. Identified grossly by their more myxoid appearance, but will not transilluminate like inflammatory polyps.

Histologically characterized by endophytic or inverted growth pattern thickened multilayered 5-30 cells thick nonkeratinizing squamous or transitional-type epithelial proliferation growing downwards into the underlying fibrous to loose and myxoid stroma.[63,64] According to Dinesh et al,[12] Inverted papilloma presented (45.4%) as commonest among benign tumors. In our study also Inverted papilloma presented (57.1%) as commonest among benign tumors. This is in contrast to Pushpalatha et al (9.09%),[14] Lathi et al(36.8%),[16] Aparnaet al (15.3%).,[11] and Alpana et al (16.17%),[13]

Pleomorphic Adenoma

Among 8 benign neoplastic lesions pleomorphic adenoma is 2 cases which represents 3.3% among total 60 nasal masses, 18.8 % among neoplastic lesions and 28.5 % among benign neoplastic lesions. Both cases are females. Histologically characterized by unencapsulated, and tend to be cellular with

predominance of modified myoepithelial cells often of plasmacytoid hyaline type. Epithelial structures showing solid, trabecular and cystic patterns intermingled with stromal elements such as myxoid, chondroid or osseous elements.[23,24]

Haemangioma

Among 26 benign neoplastic lesions haemangioma 1 case, which represents 1.6% among total 60 nasal masses, 9.0 % among neoplastic lesions and 14.2 % among benign neoplastic lesions. Histologically characterized by circumscribed lesion composed of lobules of capillaries separated by fibromyxoid stroma. The capillaries lined by plump endothelial cells and supported by prominent peicytes.[25] In our study hemangioma presented 9.0 among benign tumos. This is in contrast to pushpalatha et al.(31.8%),[14] lathi et al.(47.3%)16. Aparna et al.(38.4%),[11] Alpana et al.(57.1%) and Dinesh et al.(18.4%).

Schwannoma

Among 8 benign neoplastic lesions schwannoma was 1 case which was reported in 22-year-old male, represents 1.6 % among total 60 nasal masses, 9.6 % among neoplastic lesions and 14.2 % among benign neoplastic lesions.

Histopathologically characterized by presence of Antoni A area of compact cellular area of spindle shaped cells, elongated nuclei and eosinophilic fibrillary cytoplasm, 'Verocay' body and Antoni B a rea in which cells are widely separated by watery matrix. IHC done with S100 which shows positivity. In our study Schwannoma presented in 3.8% among benign tumors. This is in contrast to Aparna et al (7.6%).11 and Dinesh et al (18.1%).[12]

MALIGNANT LESIONS

Squamous Cell Carcinoma

Histopathologically well differentiated squamous cell carcinoma had apparent keratinization with keratin pearl formation and individual cell keratinization. Nuclei shows mild to moderate nuclear atypia with enlarged hyperchromatic nuclei and low mitotic activity. As it becomes less differentiated, tumor shows less keratinization, more nuclear atypia with increased mitotic activity. Even in poorly differentiated Carcinoma evidence of keratinization usually present.

Among 3 malignant neoplastic lesions moderately differentiated squamous cell carcinoma is 2 cases, which represents 3.3 % among total 60 nasal masses, 18.8 % among neoplastic lesions and 66.6 % among malignant neoplastic lesions. Two cases each in 41-50yrs and 51-60yrs, both cases were male.

CONCLUSION

This study mainly highlights the prevalence of benign and malignant nasal masses. As this is an institutional based study with a small sample size of 60 cases the results may not accurately reflect the original age and sex distribution as well as histological spectrum of lesions. The epidemiological data of developed countries in many aspects differ from developing nations.

Because of overlapping presentations of more commonly encountered inflammatory and infectious diseases with benign and malignant lesions by applying knowledge on clinical and radiological finings we can only provisionally diagnose most of the cases. And more over since there is a dilemma among ENT surgeons about whether all nasal masses removed at surgery should be submitted for histopathological examination or not. We concluded that histopathological evaluation is mandatory in all cases of nasal masses for accurate diagnosis. In certain cases such as Undifferentiated carcinomas, immunohistochemistry became the ultimate diagnostic technique, so that a correct and timely intervention can be made for patient management.

Conflict of Interest: None

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