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CLINICOPATHOLOGICAL STUDY OF SALIVARY GLAND LESIONS

Pathology

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ABSTRACT

INTRODUCTION: Salivary gland tumors (SGTs) are rare and their annual incidence is <1/100,000 inhabitants, without noticeable geographical gap, and they represent <5% of head and neck tumors.[1.]

Material and method-Salivary gland tumors diagnosed in the department of pathology gmc Aurangabad, maharashtra during 3 years duration between Jan 2016 to Dec 2018 were included in this study which forms 2 years retrospective and 1 years prospective study.

Result- Out of 40 cases, 6 cases were diagnosed as a non-neoplastic 26 were diagnosed as benign and 8 as malignant tumours of Salivary gland constituting 15 % , 65 % and 20 % respectively. Most common benign tumour was pleomorphic adenoma and most common malignant tumour was adenoid cystic carcinoma.

Coclusion- Histomorphology is the gold standard in the diagnosis of salivary gland tumours. Among all salivary glands tumours. . very few studies are available on head and neck tumours hence larger studies needed for discriminate and influencing factors.

KEYWORDS

INTRODUCTION:

Salivary gland tumors (SGTs) are rare and their annual incidence is <1/100,000 inhabitants, without noticeable geographical gap, and they represent <5% of head and neck tumors.[1] Salivary glands are the site of origin of many non neoplastic and neoplastic lesions[10]

Although almost 40 histologic types of epithelial tumors of the salivary glands exist, some are exceedingly rare and may be the subject of only a few case reports[2].

Benign tumors of the salivary glands occur in the age group of 30 - 70years. Malignant tumors are more frequent in women than men. The peak incidence for malignant tumors is 6th and 7th decades.[3,4]

MATERIAL AND METHOD-

Salivary gland tumors diagnosed in the department of pathology gmc Aurangabad, maharashtra during 3 years duration between Jan 2015 to Dec 2018 were included in this study which forms 2 years retrospective and 1 years prospective study.

The biopsy material were stained by standard haematoxylin and eosin stain (H & E) and For all the retrospective case blocks were retrieved and serial sections were taken for each biopsy and were stained by standard haematoxylin and eosin stain (H & E).The H&E stained sections were then studied under light microscope. . Special stain like PAS was performed whenever required.

Objective

The objective of this study was to study various histomorphological patterns of salivary gland tumours with clinico-pathological correlation and to study age and sex distribution in salivary tumours. also study different anatomical locations of salivary gland tumours.

RESULTS –

A total of 40 Salivary gland tumors were received, which included both prospective and retrospective cases.

Out of 40 cases, 6 cases were diagnosed as a non-neoplastic 26 were diagnosed as benign and 8 as malignant tumours of Salivary gland constituting 15 % , 65 % and 20 % respectively.

Most common benign tumour was pleomorphic adenoma and most common malignant tumour was adenoid cystic carcinoma.

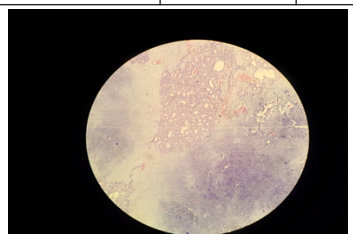
In this study, 60% of affected patients were male (n = 24) and 40% were female (n = 16). The age of patients in this study was between 10 and 80 years old (mean age 45 years).

Most of the tumors were located in the major salivary glands (97.5%) among which parotid was the most common site (67.5%) . Minor salivary glands were involved in 2.5% of cases.

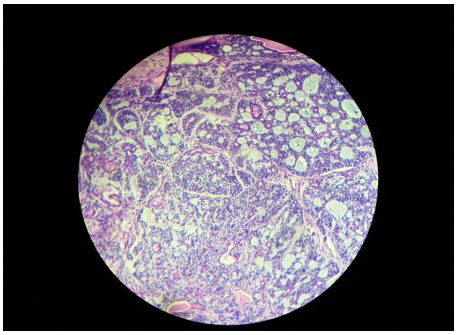
	Benign Tumours		
	Frequency	Male	Female
Pleomorphic Adenoma	14(35%)	5	9
Warthin's tumor	4 (10%)	4	0
BCA	4 (10%)	1	3
Myoepithelioma	1 (2.5%)	1	0
Sebaceous Adenoma	1 (2.5%)	1	0
Sclerosing Polycystic Adenosis	2 (5.0 %)	2	0
Total	26 (65%)	14	12

	MALIGNANT TUMOURS		
	FREQUENCY	MALE	FEMALE
MUCOEPIDERMOID	2(5%)	2	0
ADENOID CYSTIC CA.	3(7.5%)	2	1
CARCINOMA EX P.A	1(2.5%)	1	0
SCC	1(2.5%)	0	1
ACC	1(2.5%)	0	1
TOTAL	8(20%)	5	3

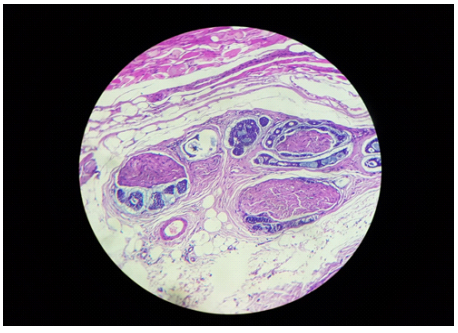
	SITE OF TUMOUR		
SITE	Non- Neoplstic	Benign	Malignant
PAROTID	3	20	5
SUBMANDIBULAR	2	6	3
MINOR SALIVARY GLANDS	1	0	0
TOTAL	6	26	8



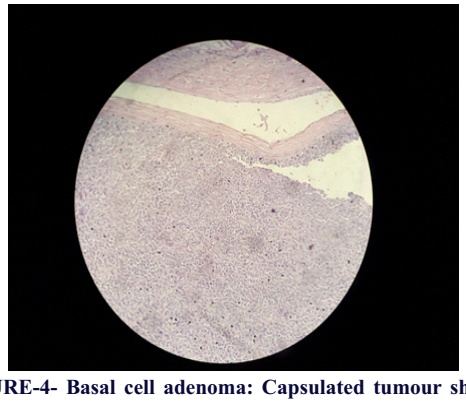
Picture-1 Pleomorphic Adenoma: Showing Epithelial And Mesenchymal Component, Epithelial Cdells Are Glandular, Stroma Is Myxoid H&e 20x.



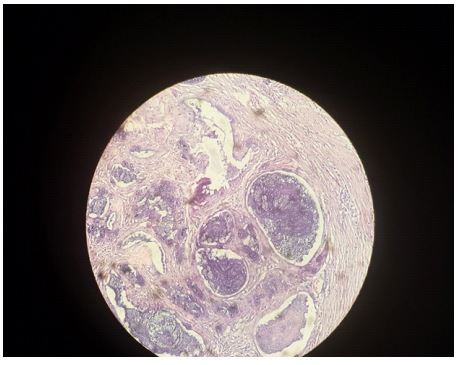
PICTURE-2- adenoid cystic carcinoma: SHOWING cribriform pattern H&E 20X..



PICTURE:3- adenoid cystic carcinoma- SHOWING perineural invasion. H&E 40X.



PICTURE-4- Basal cell adenoma: Capsulated tumour showing solid pattern , bland nuclear feature H.&E 20X..



PICTURE-5- Sclerosing polycystic adenosis-showing small cystic spaces surrounded by sclerosing area H&E 20X..

DISCUSSION

In present study M:F ratio was 1.3:1, In the study by AHMED ET al et M:F ratio was 1.17:1 and . In das et al and shreedevi et al ratio was 1.28:1 and 1.1:1 respectively.

STUDY	MALE
AHMED ET AL[4]	1.17:1
DAS ET AL[5]	1.28:1
SHREEDEVI ET AL[9]	1.1:1
PRESENT STUDY	1.37:1

In the presentstudy, benign tumors were more common than malignant ones in all the salivary glands.

STUDY	TOTAL	BENIGN(%)	MALIGNANT(%)
AHMED ET AL[4]	100	86	14
NAGARKAR et al[6]	70	35	25
Ankur ET AL[10]	67	39	38
PRESENT STUDY	34	26	8

The present study has the most common benign and malignant tumors of parotid gland and submandibular gland were PA and adenoid cystic carcinoma respectively.

Parotid gland was most common site for salivary glands tumour followed by submandibular gland. Sublingual salivary glands was the least common site for salivary gland tumours.
PA was the most common SGTs, which consists of 35% of all tumors and 53.8 % of benign SGTs

Histopathological feature shows both epithelial and mesenchymal differentiation. Epithelial component includes the ductal structures in most of cases . some cases shows spindle component. Stroma is myxoid in most of cases followed by chondroid myxoma.

Adenoid cystic carcinoma (7.5%) was the most common malignant SGT among all salivary glands tumour and (24%) among all malignant tumour. followed by the mucoepidermoid carcinoma (5%). Das et al and Subhashraj et al[7] also found adenoid cystic carcinoma the same occurrence 25% and 6.6%, respectively.

Histologically cribriform pattern most common followed by tubular. Perineural invasion seen in most of cases.

Among non-neoplastic lesion sialoadenitis was most common followed by lymphoepithelial cyst. Ankur et al[10] also found sailoadenitis most common non-neoplastic lesion of salivary gland lesion.

CONCLUSIONS

Histomorphology is the gold standard in the diagnosis of salivary gland tumours. Among all salivary glands tumours frequency of benign tumours is more compare to malignant ones. Parotid was the most common site followed by submandibular. Minor salivary gland tumours are very rare.

Sailoadenitis was most common salivary gland lesion followed by lymphoepithelial cyst. Presentation of benign tumours are early as compare to malignant tumours. very few studies are available on head and neck tumours hence larger studies needed for discriminate and influencing factors.

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