Original Research Article

A cytological study of salivary gland lesions

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Abstract

Background: FNAC is very useful technique and routinely done on palpable lesion of the body as a diagnostic procedure. For preoperative diagnosis of salivary gland lesions, triple approach technique is used in which FNAC is one of the most important techniques. The main purpose of FNAC of salivary gland lesion is in the investigation of any palpable lump and to avoid unnecessary surgery in specific benign condition. The advantages are – it provides rapid and accurate diagnosis, is therapeutic as well as diagnosis in many cystic condition.

Materials and methods: Retrospective study was done for 1year from January 21 to January 22 at SBKS MI & RC, Vadodara, Gujarat. In present study, 96 cases were taken with salivary gland lesions that underwent FNAC in our Department.

Results: Out of 96 cases, 61 (63.54%) cases were neoplastic and 35 (36.46%) cases were non-neoplastic which exclude chronic sialedenites. Among cases 61, 52 (85.25%) cases were benign and 9 (14.75%) cases were malignant. Males predominate and were 59 cases whereas female comprising 37 cases. Male to female ratio was 1.6:1. The age range was from 11 to 73 years.

Conclusion: The present was a single institutional experience where analysis of salivary gland lesion was carried out. The findings of age, sex, site distribution and pathologic features encountered in present study were comparable with those studies reported from India and other parts of the world. Although the number of salivary gland tumors discussed in this study is small, the findings should contribute in better understanding of the disease.

Key words

Cytology, Salivary gland, Lesions.

Introduction

There is a wide spectrum of salivary gland lesions with morphologically and clinically different. There are three major salivary glands – parotid, submandibular and sublingual as well as minor salivary glands. In these glands various

non-neoplastic as well as neoplastic lesion may arise. These may be benign or malignant. They represent approximately < 5% of head and neck tumors [1].

Aim and objectives

- To study the morphological appearances of salivary gland lesions.
- To study the prevalence of salivary gland lesions.
- To evaluate the incidence, age at the occurrence, and sex ratio among the patient with salivary gland lesions.

Materials and methods

Retrospective study was done for 1years from January 2021 to January 2022. In present study, 96 cases were taken with salivary gland lesions that underwent FNAC in our Department. Written consent was taken before the procedure. The clinical data pertaining to patients' age, sex and anatomical site detailed clinical history were recorded and doing detailed physical examination. Aspiration was done with standard precautions using 22 gauge needle [2-4]. Smears were immediately fixed in 95% alcohol. Four to five smears of each case were stained with Hematoxylin and eosin stain (H&E) and May Graunwald Geimsa (MGG), air dried smears were used. Cytopathological diagnosis had been recorded in each case.

Results

In our study, we received 96 cases of salivary gland lesion during one year period from January 2021 to January 2022. Out of 96 cases, 61 (63.54%) cases were neoplastic and 35 (36.46%) cases are non-neoplastic which exclude chronic sialedenites. Among cases 61, 52 (85.25%) cases were benign and 9 (14.75%) cases were malignant. Males predominated and were 59 cases whereas female comprising 37 cases. Male to female ratio was 1.6:1. The age range was from 11 to 73 years (**Table – 1**).

Table – 1: Age wise distribution of lesions.

Age (Years)	Benign	Inflammatory	Malignant	Total
1-10	2	0	0	2
11-20	4	2	0	6
21-30	9	6	0	15
31-40	5	4	1	7
41-50	10	5	1	15
51-60	10	14	4	26
61-70	9	4	2	13
71-80	3	0	1	1
Total	52	35	9	96

Among the all salivary gland lesions, the commonest lesion was pleomorphic adenoma which comprised 27% of all lesion followed by warthins tumor. Similarly among malignant salivary gland tumor, mucoepidermoid carcinoma was most common. In our study male preponderance was seen in overall gland lesion (**Table – 2**). Sex wise distribution was as per **Table – 3**. Salivary gland wise distribution was as per **Table – 4**.

Discussion

In this study, salivary gland tumors were found in patients between ages of 11 to 73 years (mean age 42 years) with male predominance. The incidence of benign neoplasm was more in fourth and fifth decade whereas malignant neoplasms were seen more common in fifth and sixth decade. In the present study, benign tumor was more common than malignant tumor. Malignant tumor found in older age group. Parotid gland was the most common site of salivary gland

tumor followed by minor salivary glands than submandibular gland. Among benign tumors pleomorphic adenoma was most common and mucoepidermoid was the commonest among malignant tumors. Our findings are comparable with other studies [5-9].

Table – 2: Diagnosis

Diagnosis	**Total**
Acute siladenitis	10
Chronic siladenitis	27
Acute on chronic siladenitis	5
Cystic salivary lesion	8
Warthin tumor	14
Pleomorphic adenoma	23
Carcinoma ex Pleomorphic Adenoma	1
Adenocarcinoma salivary gland	1
Adenoid cystic carcinoma	1
Metastatic keratinizing squamous cell carcinoma	1
Polymorphus Low Grade Adenocarcinoma	1
Mucoepidermoid carcinoma	4
Total	96

Table – 3: Incidence of salivary gland lesion sex wise.

Salivary gland tumor	**Male**	**Female**	**M : F**
Pleomorphic adenoma	14	09	3 : 1
Warthins tumor	14	00	14 : 0
Mucoepidermoid carcinoma	00	04	0 : 4
Adenoid cystic carcinoma	00	01	0 : 1
Polymorphous low grade adenocarcinoma	00	01	0 : 1

Conclusion

The present was a single institutional experience where analysis of salivary gland lesion was carried out. The findings of age, sex, site distribution and pathologic features encountered in present study were comparable with those studies reported from India and other parts of the world. Although the number of salivary gland tumors discussed in this study is small, the findings should contribute in better understanding of the disease.

Table – 4: Incidence of salivary gland lesions glands wise.

Lesion	**Total** %
Parotid gland	64%
Submandibular gland	31%
Sublingual gland	3%
Minor salivary gland	2%
Total	100%

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