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One year prospective study on salivary gland neoplasms in a tertiary care hospital in central Kerala

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Abstract
Background: *Though rare, salivary gland neoplasms form an important group of head and neck neoplasms. There are only limited number of studies on salivary gland neoplasms, especially in Kerala.*
Methods: *This is a prospective study of 1 year on patients presenting with salivary gland neoplasms to oncology department of a tertiary care hospital. Details including demographic profile, clinical data and histopathological findings were recorded in a proforma and analysed.*
Observations: *A total of 30 patients were studied of which only 9 were males. Median age was 42 years. Majority of patients (63.3%) presented with a neck swelling, mostly on the left side (56.6%). 66.6% of patients had tumour of the parotid gland. Pleomorphic adenoma was the commonest histological type (73.3%).*
Conclusion: *Though rare, salivary gland neoplasms should be considered in the differential diagnosis of a neck swelling. Salivary gland neoplasms were most commonly encountered in women with parotid involvement being the commonest in our population.*

Introduction

Salivary gland neoplasms are rare and constitute 3-4% of head and neck neoplasms.(1)The major salivary glands include the parotid glands, submandibular glands, and sublingual glands. There are also approximately 750 minor salivary glands scattered throughout the submucosa of the oral cavity, oropharynx ,hypopharynx, larynx, parapharyngeal space, and nasopharynx.(2) Most neoplasms arise in the parotid gland (70%), whereas tumours of the submandibular gland (22%) , sublingual and minor salivary glands (8%) are less common.(3) The main classification of salivary gland tumours is World Health Organization (WHO) classification. Based on the latest WHO classification, salivary gland neoplasms are classified as epithelial tumours and stromal tumours.(4)

Considering the limited studies on salivary gland neoplasms in kerala, the present study was designed to evaluate the salivary gland tumours in Keralapopulation for 1 year.

Methods

This prospective study was carried out on patients attending department of surgical oncologyin a tertiary care hospital in central Keralafrom August 2008 to August 2009. Demographic profile including, age, sex, residence, occupation and

comorbidities were recorded. FNAC and histopathology details were recorded.

Observations

A total of 30 patients who presented with salivary gland neoplasms were included in the study. There were 9 males. The demographic and clinical characteristics of the disease are shown in Table 1. Majority of the patients were in the age group of 40-50 years (53.3%, median age 42 years), with the youngest being 25 years old and oldest being 61 years old.

The duration of presenting complaints ranged from 2 months to 24 months, with a median of 11 months.30% of patients had complaints lasting more than 1 year.

19 (63.3%) patients presented with a swelling, 17 (56.6%) on the left side. 20 (66.6%) patients had swelling within the parotid gland.

Among the parotid tumours one patient had signs of fixity, deep lobe involvement and nodal involvement.

On risk factor evaluation, 1 (3.3%) patients had a positive family history and 2 (6.6%) patients had a previous history of salivary gland tumour. 5 (16.6%) patients had history of smoking while 1 patient had previous exposure to radiation. (Table 2).

Histopathologic evaluation revealed pleomorphic adenoma as the commonest type. (73.3%)

Table 1: Distribution of Study Subjects per demographic and clinical characteristics

Gender

Male	9
Female	21

Age (in years)

20-30	2
30-40	8
40-50	16
50-60	3
>60	1

Presenting Complaint

swelling	19
pain	11

Duration of Symptoms

<6 months	7
6 months - 1 year	14
> 1 year	9

Side

Right	13
Left	17

Site

Parotid	20
Submandibular	10

Signs of parotid tumours

Fixity	1
Deep lobe involvement	1
Facial nerve involvement	0
Nodal involvement	1

Table 2: Distribution of Study Subjects according to risk factors

Family History

Absent	29
Present	1

Previous history of salivary gland tumour

Absent	28
Present	2

Smoking

Yes	5
No	25

Previous history of radiation

Yes	29
No	1

Table 3 – Histopathology

Pleomorphic adenoma	22
Warthins tumor	6
Mucoepidermoid carcinoma	1
Neurilemmoma	1

Discussion

As the results indicated, the age of patients was in the range of 25-61 years (mean: 42 years). This finding is similar to those reported by Ansari[5] in Iran, Otoh *et al*.[6] in Nigeria, Al-Khateeb and Ababneh[7] in north Jordanians and Li *et al*.[8] in China.

Our study showed a 70% female predominance in salivary gland neoplasms. This was similar to the studies by de Oliveira[9] and Dhanuthai[10] in Brazil and Thailand. However, several studies in China by Otoh and Tian[6,11] have reported more male predilection in salivary gland neoplasms. This could be due to the more frequency of Warthin's tumour in Chinese populations.

Our study indicated that the most common site of occurrence for salivary gland tumours was parotid (66.6%). This is in concordance with studies conducted elsewhere in the world.[12–15]

According to the results of the present study, pleomorphic adenoma is the most common salivary gland tumour, which consists of 73.3% of all tumours. This tumour more often is seen in the parotid. Many of epidemiological studies have reported similar high incidence of pleomorphic adenoma (42-80%).[1,16]

Conclusion

Salivary gland tumours are less frequently encountered in clinical practice. Any patient presenting with a swelling in the region of neck should be suspected of salivary gland neoplasm and investigated. In this study, epidemiological data about clinical and histopathological characteristics of salivary gland tumours in Kerala population was compared with other world-wide studies. Parotid gland was the most affected and women were affected more than men. Pleomorphic adenoma was the most common salivary gland tumours.

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