

Original Article

Clinicopathological study of minor salivary gland tumour

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Abstract:

Objectives: To find out the clinicopathological factors of minor salivary gland tumour.

Methods: An attempt has been made to explore the relative incidence, clinical presentation, age and sex distribution, histological type, site of involvement of each cases of minor salivary gland tumour. Thirty cases of minor salivary gland tumours were studied. Sampling method was purposive, convenient. Data were collected in a prescribed data sheet from BSMMU, DMCH and BKZMC and SSH, Dhaka, during the period of October 2006 to May 2007.

Results: In this series of 30 patients, 20 cases (67%) were found malignant and 10 cases (33%) were benign. Regarding the site of distribution of minor salivary gland tumour, 67% (20) were found in the hard palate, three patients were found in the soft palate, three patients in the cheek, two in the nasopharynx and two in the alveolar margin. All benign tumours in this series were pleomorphic adenoma. Monomorphic adenoma was not found in any patients. Among malignant tumour adenoid cystic carcinoma was the most common 70% (14). Pleomorphic adenoma was found in 33% (10) of total cases. Muco-epidermoid carcinoma was the 2nd most common malignant tumour 12.5% (4). Carcinoma in pleomorphic adenoma was the least common histological type 6% (2).

Conclusion: Early diagnosis and treatment of minor salivary gland tumour is likely to lead to a fair outcome. All patients with swelling in hard palate should be considered as a minor salivary tumour. Sub clinical lymphatic metastasis may occur in malignant cases, so all patients should be referred for radiotherapy following surgery. Distant metastases are also rare in such type of malignancy.

Key words: *Minor salivary gland, Neoplasm.*

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Introduction:

Salivary gland neoplasms are reported to represent around 3 percent of all head and neck tumours.¹ Minor salivary glands are 14-22 percent of all salivary gland carcinomas.² Unlike parotid and submandibular salivary gland tumours the majority of tumours arising from the minor salivary glands are malignant. Similarly, tumours arising from the sublingual gland are also more likely to be malignant

rather than benign. Various series from around the world report annual incidence for all salivary gland neoplasm's is between 0.4 to 13.5 cases per 100,000.³

There are four large series describing 22,866 salivary gland neoplasms reported in the literature. These series are from the Armed Forces Institute of Pathology in 1991, Memorial Sloan Kettering in 1996, Pathology Institute University of Hamberg in 1986, and British Salivary Gland Panel in 1985. Of these 22,866 salivary gland neoplasms, 5,539 or 23% were localized in the minor salivary glands. Based on this data it was found that for every 100 parotid tumours, there are about 40 minor salivary gland tumors, 15 submandibular tumours and 1 sublingual tumor.² Salivary gland neoplasm occur in the third to fifth decade and have a slight female predominance. Within the oral cavity there is a 90% chance that a minor salivary gland tumour is malignant.⁴

As a rough guide the site and nature of salivary gland tumour may be summarized by the following statements.⁵

- 90% of salivary gland tumours involve the parotid.
- 90% of parotid tumours are benign.
- 90% minor salivary gland tumours are malignant.

About 54% of minor salivary gland tumours are found in the palate, 21% in the lip, and 11% in the buccal mucosa, 14% are found in the rest of the site.²

Out of the 5539 minor salivary gland lesions, 44% were benign and 56% were malignant. This is in sharp contrast to the commonly quoted 80% malignancy which is derived from the study of patients from Memorial Sloan Kettering Cancer Center. In this

articles data may be biased by there patient's population.⁶

From this study, the investigators want to see the relative incidence of minor salivary gland tumours, the age and sex distribution, nature of presentation and histological variants commonly found in our country and compare with findings of previous studies in home and abroad.

Aims and objectives:

Aims and objectives of the study was to see the relative incidence of minor salivary gland tumours, the age and sex distribution, nature of presentation and histological variants commonly found in minor salivary gland.

Methods:

Thirty cases of minor salivary gland tumours both benign and malignant were studied. Sampling method was purposive, convenient. Data are collected in a prescribed data sheet from Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka Medical College Hospital, Begum Khaleda Zia Medical College and Shahid Sohrawardy Hospital, Dhaka, during the period of October 2006 to May 2007.

Results:

In this series of 30 patients, 20 cases (67%) were found malignant and 10 cases (33%) were benign.

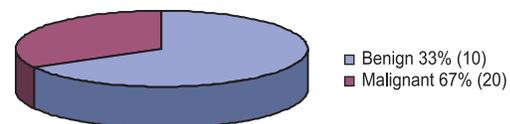


Figure-1: Incidence of benign and malignant tumour.

Male are more affected than female. Among 30 patients 20 patients were male and 10 patients were female.

Regarding clinical presentation in this series patients were presented with swelling. Pain was present in 46.66% (14) of cases. Who complained of pain is all suffered from malignant tumour. None of the benign cases complained of pain. Two patients presented with nasal obstruction. In these two cases tumour involves the nasopharynx. None of the patients had palpable neck node. There is also no feature of distant metastases in any patients. Patient with swelling in the oral cavity presented at a relatively earlier and seek advice from the doctor as early as possible.

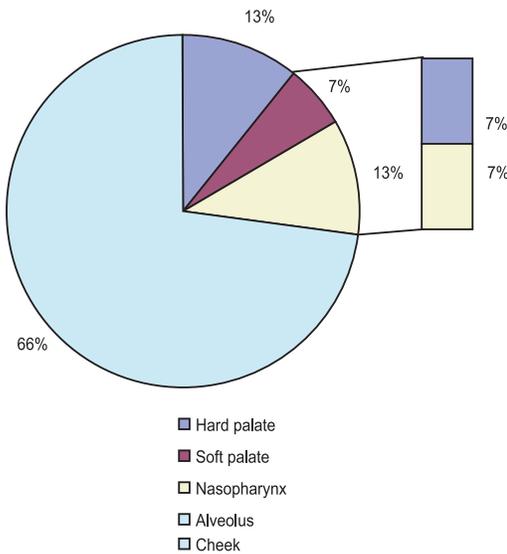


Figure-2: Topographical distribution of minor salivary gland tumour.

The site of distribution of minor salivary gland tumour, 67% (20) were found in the hard palate, in three patients tumour were found in the soft palate, three patients in the cheek, two in the nasopharynx and two in the alveolar margin.

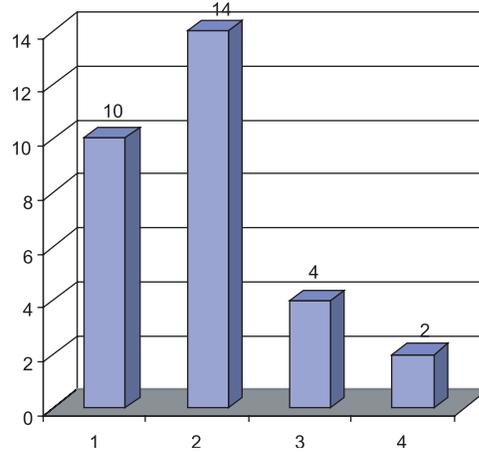


Figure-3: Incidence of different type of tumours.

All benign tumours in present series were pleomorphic adenoma 33% (10). Monomorphic adenoma was not found in any patients. Among malignant tumour adenoid cystic carcinoma was the most common, 70% (14). Muco-epidermoid carcinoma was the 2nd most common malignant tumour 12.5% (4). Carcinoma in pleomorphic adenoma was the least common histological type 6% (2).

Discussion:

In this present series of 30 cases of minor salivary gland tumour were analyzed with their relative incidence, age and sex distribution, clinical presentation, site of involvement, histological type and treatment given. This relatively small series comprises of benign and malignant tumours of minor salivary gland. Diagnosis of all tumours was confirmed by histopathological examination. Results obtained in this series are more or less in general agreement with the similar reports in the literature.

Incidence of benign and malignant tumour in this series is 33% and 67% respectively. This percentage is similar to another study.⁴ Male are more sufferer than female in minor salivary gland tumour. In literature male female ratios

are equal.⁴ This may be due to the social and religious factors of our country.

Regarding the site of distribution of minor salivary gland tumour, 67% (20) were found in the hard palate, in three patients tumour were found in the soft palate, three patients in the cheek, two in the nasopharynx and two in the alveolar margin. It corresponds to the similar study done on 1985.²

Preoperative diagnosis was carried out in all patients by FNAC, except the nasopharynx tumour which was diagnosed by punch biopsy. No CT or MRI was done in any case. After doing histological examination malignancy was found in two benign tumour diagnosed FNAC previously. Histological types of malignancy were also changed in some cases after doing histopathological examination.

Malignancy is more common in elderly people. In this series 33.33% (10) of patients were present at 4th decade, 26.66% (8) were in 5th decade. In younger age benign tumour is more common. This result corresponds with the other study.⁷

Pleomorphic adenoma is the commonest benign tumour and adenoid cystic carcinoma is the commonest malignant lesion. It is relatively similar to a study done on 1985, Where among 336 of minor salivary gland tumours 42.9% were pleomorphic adenoma, 12.1% were adenoid cystic carcinoma, carcinoma in pleomorphic adenoma were 7.1%, muco-epidermoid carcinoma were 8.9%.²

No patients with malignant tumours had lymphatic or distant metastasis. All are included in the stage-I and stage-II disease. Including benign tumours all are treated surgically. Malignant patients are referred for radiotherapy following surgery. In this series no malignant tumour was found in stage-III or stage-IV.

Most series reporting the result of the treatment for minor salivary gland carcinomas are extended over many years or decades. As a result various treatments have been proposed ranging from surgery or radiotherapy alone, to a combination of both.^{8,9} Disease specific survivals at five years is reported at 60-90% in patients with this malignancy.⁸ In this study it is not possible to see the prognosis due to the limitation of the period of study.

Conclusion:

Early diagnosis and treatment of minor salivary gland tumour is likely to lead to a fair outcome. All patients with swelling in hard palate should be considered as a minor salivary tumour. Sub clinical lymphatic metastasis may occur in malignant cases, so all patients are referred for radiotherapy following surgery. Distant metastases are also rare in such type of malignancy.

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