Salivary Gland Neoplasms in Jammu Population- A Hospital Based Study

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ABSTRACT

Aims & Objectives: To study various salivary gland neoplasms in terms of clinical presentation, pathological diagnosis, and treatment employed. Material & Methods: The present study was a prospective study, conducted in the Department of ENT, GMC Jammu, from April 2018 to February 2019 on 20 patients with salivary gland lesions. Results: Out of 20 patients, the site of lesion was parotid in 13 patients, submandibular in 5 patients, and minor salivary gland in 2 patients (one in hard palate and one in buccal mucosa). FNAC report of parotid swelling was pleomorphic adenoma in 12 and mucoepidermoid cancer in 1 patient. FNAC of submandibular swelling was pleomorphic adenoma in 3 patients and mucoepidermoid cancer in 2 patients. FNAC of minor salivary gland lesions was pleomorphic adenoma in both cases. All neoplasms were accordingly surgically removed. Conclusion: Salivary gland neoplasms are best managed in head and neck clinics because of their rarity and need for a thorough work-up.

KEYWORDS: Salivary, Pleomorphic, Mucoepidermoid

INTRODUCTION

Salivary gland neoplasms are rare, the majority are benign and only 20% malignant. The incidence of salivary gland tumors ranges annually from 0.5-2 per 100,000 in the different parts of world. 1

Tumors can occur in both major and minor salivary glands. 80% of major salivary gland tumors occur in parotid glands, while most minor salivary gland tumors are located in palate. It is believed that the smaller the salivary gland is, more likely it is to be malignant.2

80% salivary neoplasms are in the parotids, of which 80% are benign, out of which 80% are pleomorphic adenoma. 15% of salivary tumors are in the submandibular gland, of which 50% are benign, out of which 95% are pleomorphic adenomas. 10% of salivary neoplasms occur in minor salivary glands (lip, palate, cheeks), out of these 90% are malignant. Mucoepidermoid tumor is the commonest malignant tumor in parotid gland while adenoid cystic carcinoma followed by mucoepidermoid cancer are common in submandibular and sublingual salivary glands.3

Aetiology of salivary neoplasms can be genetic (loss of alleles of chromosomes in 12q, 8q and 17q), racial (Eskimos are more prone), infective (Mumps, Epstein-Barr virus), radiation, smoking, sex (benign tumors more common in females) and environment (vitamin A deficiency, exposure to nickel, chromium, silica).3

Tumors in the parotid or submandibular glands usually presents as enlarging mass, which may be associated with pain or facial palsy, if the mass is malignant. Minor salivary gland tumors predominantly present as a submucosal intraoral mass, which can eventually ulcerate. Clinical features suggestive of malignancy include rapid growth in size, pain, involvement of facial nerve, tumor fixation to overlying skin or underlying muscle and cervical lymphadenopathy.4

The aim of our research article is to study various salivary gland neoplasms in terms of clinical presentation, pathological diagnosis and treatment employed.

MATERIALS AND METHODS

The present prospective study was conducted in the Department of ENT, GMC Jammu from April 2018 to February 2019 on 20 patients with salivary gland lesions. A detailed and relevant clinical history, general physical examination, local examination of swelling, and routine ENT examination was done. All relevant hematological and biochemical investigations were done.

All patients were subjected to Fine Needle Aspiration Cytology for pathological diagnosis of the mass. If malignancy was suspected, a CT scan was done to know the extent of tumor. All of the 20 patients were operated under general anesthesia after satisfactory pre-anesthetic check-up.

RESULTS

Majority of patients in our study were in the age group of 41-50 years, with mean age being 45.2 years (Figure 1).
Out of 20 patients, 11 were females (55%) and 9 were males (45%) (Figure 2).

Out of 20 patients, site of lesion was parotid in 13 patients (65%), submandibular in 5 patients (25%) and minor salivary gland in 2 patients—one in hard palate and one in buccal mucosa (10%) (Figure 3).

Out of 13 parotid swelling patients, 12 patients had painless, mobile swelling while swelling was fixed and associated with pain in 1 patient. None of the patient had involvement of facial nerve or neck node (Figure 4). Out of 5 submandibular swelling patients, 3 patients presented with painless, mobile swelling while 2 patients presented with hard, fixed swelling. None of the patient had involvement of skin or ulceration (Figure 5).

Both patients with minor salivary gland involvement presented with intraoral painless mass. Pathological diagnosis as per FNAC report of parotid swelling was pleomorphic adenoma in 12 and mucoepidermoid cancer in 1 patient (Figure 6).

Pathological diagnosis of submandibular swelling was pleomorphic adenoma in 3 patients and mucoepidermoid cancer in 2 patients (Figure 7).

Pathological diagnosis of both minor salivary gland swellings was pleomorphic adenoma. All of the 12 pleomorphic adenoma parotid gland patients were subjected to superficial parotidectomy while 1 patient with mucoepidermoid tumor of parotid gland underwent total conservative parotidectomy (Figure 8).
All 5 submandibular neoplasms, irrespective of pathological diagnosis, were treated with wide excision of gland. Pleomorphic adenoma of hard palate as well as buccal mucosa underwent wide excision.

DISCUSSION

The diagnosis and treatment of salivary neoplasms are complicated by their relative infrequency, limited range of pre-treatment information available and a wide range of biological behavior seen with different pathological variants. Surgery is the mainstay of treatment of salivary gland tumors. The majority of patients in our study were in the age group of 41-50 years, with the mean age being 45.2 years. Out of 20 patients, 11 were females and 9 were males. Out of 20 patients, the site of lesion was parotid in 13 patients, submandibular in 5 patients and minor salivary gland in 2 patients (one in hard palate and one in buccal mucosa). This is consistent with the study done by Nagarkar NM et al., who showed a majority of lesions to be in the parotid gland.

Out of 13 parotid swelling patients, 12 patients had painless, mobile swelling while swelling was fixed and associated with pain in 1 patient. None of the patient had involvement of the facial nerve or neck node. Out of 5 submandibular swelling patients, 3 patients presented with painless, mobile swelling while 2 patients presented with hard, fixed swelling. None of the patients had involvement of skin or ulceration. Both patients with minor salivary gland involvement presented with intraoral painless mass. Pain usually occurs because of the capsular distension by the tumor, nerve infiltration, or sometimes, tumor necrosis.

The pathological diagnosis as per the FNAC report of parotid swelling was pleomorphic adenoma in 12 and mucoepidermoid cancer in 1 patient. Pathological diagnosis of submandibular swelling was pleomorphic adenoma in 3 patients and mucoepidermoid cancer in 2 patients. The pathological diagnosis of both minor salivary gland swellings was pleomorphic adenoma. The diagnostic yield of FNAC in salivary gland masses is quite good, showing sensitivity up to 85% and specificity up to 99%.

All of the 12 pleomorphic adenoma parotid gland patients were subjected to superficial parotidectomy with facial nerve dissection and preservation while 1 patient with a mucoepidermoid tumor of parotid gland underwent total conservative parotidectomy, which entails full dissection of all branches of facial nerve from the superficial lobe followed by delivery of deep lobe underneath the nerve.

Out of 5 submandibular neoplasms, in 3 benign cases, complete excision of the gland was done. In 2 malignant lesions, excision of submandibular gland and clearance of adjacent soft tissues was also done. Pleomorphic adenoma of hard palate, as well as buccal mucosa, underwent wide excision with adequate margins and closure.

CONCLUSION

Salivary gland neoplasms are best managed in head and neck clinics because of their rarity and need for a thorough work-up. Adequate knowledge of clinical presentation, pathology, and natural history of salivary gland neoplasms is necessary for their proper management.

REFERENCES