RESEARCH ARTICLE ISSN: 2349-2678

Contents lists available at www.ijpba.in

International Journal of Pharmaceutical and Biological Science Archive

Index Copernicus Value 2017: 71.80

Volume 6 Issue 1; January-February; 2018; Page No. 41-44

A CROSS SECTIONAL STUDY ON TREATMENT & PROGNOSIS OF SALIVARY GLAND TUMOURS IN PATIENTS FROM CENTRAL INDIA

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ABSTRACT

BACKGROUND: Salivary gland neoplasms are head and neck tumours that are extremely rare. They make up 8.1 percent of tumours in this anatomical area and 0.2 percent of all cancers, according to the literature. Most of these tumours are benign and about 20 percent are found to be malignant, and in the sixth decade, most cases are observed.

MATERIAL AND METHODS: The research involved a total of 32 patients, of which 24 patients had parotid lesion and 8 had other salivary gland involvement. From all the participants, demographic data was obtained. Proper history taking, all routine haematological and biochemical studies were performed. There was a computed tomographic scan and fine needle aspiration.

RESULTS: 17 (53.12 percent) of the 32 patients were male and 15 (46.88 percent) were female. No preponderance of sex existed. In this series, the average age was 51.45 years and no particular age group distress was observed. 26 (81.25 percent) of 32 patients were diagnosed with benign lesions and 6 (18.75 percent) had malignant lesions. Of the 26 benign tumours in total, 22 were observed in the parotid gland and 2 in the palate and sub-mandibular gland, respectively. In the parotid and the sub-mandibular gland, 2 of the 6 malignant tumours were observed. In 4 patients, palpable cervical nodes that displayed metastasis were found. There was a superficial parotidectomy in all benign parotid cases. Mucoepidermoid carcinoma underwent a complete conservation parotidectomy, while radical parotidectomy with radical neck dissection and adjunct radiotherapy was treated in one patient who had skin tethering with neck nodes.

CONCLUSION: Surgery is the cornerstone of salivary tumour care since it serves both diagnostic and therapeutic functions. Long-term follow-up is critical for assessing therapy benefits.

KEYWORDS: Salivary gland neoplasms, parotidectomy, Mucoepidermoid carcinoma, radical neck dissection, adjunct radiotherapy

INTRODUCTION:

Salivary gland neoplasms are head and neck tumours that are extremely rare. They make up 8.1 percent of tumours in this anatomical area and 0.2 percent of all cancers, according to the literature[1]. Most of these tumours are benign and about 20 percent are found to be malignant, and in the sixth decade, most cases are observed[2,3]. The smaller the gland, the more likely a malignant tumour is. Around 20-25% of parotid tumours are malignant, 40 percent of sub-mandibular tumours are malignant, and about 90 percent of sublingual tumours are malignant. Salivary gland cancer may be prevented by eating a diet high in vitamin C and low in cholesterol. Salivary gland neoplasms are rare malignancies of the head and neck region[4,5]. These tumours develop in large salivary glands, such as parotid glands, submandibular glands, sublingual glands, and tiny salivary glands, which are located in the upper gastrointestinal tract mucosa and upper respiratory tract mucosa. Men and women are nearly equally affected[6]. A diet high in vitamin C and low in cholesterol has been demonstrated in certain trials to be useful in avoiding salivary gland cancer[7]. Salivary gland tumours are commonly associated with therapeutic

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radiation for other head and neck cancers, occupational exposure to rubber and woodworking, and jobs in beauty shops or hairdressers. Previous cancers connected to the Epstein-Barr virus, immunosuppression, and radiation have all been linked to an increased risk of salivary gland cancer. HIV infection has also been linked to an increased incidence of salivary gland cancer[8].

MATERIAL AND METHODS

This was a prospective study in which patients diagnosed with salivary gland tumours were included. The current research was carried out in the Surgery Department of a tertiary healthcare hospital. The institutional ethical board accepted the research protocol and all the patients who were able to participate in the study received written informed consent. The research involved a total of 32 patients, of which 24 patients had parotid lesion and 8 had other salivary gland involvement. From all the participants, demographic data was obtained. Proper history taking, all psychiatric testing, all routine haematological and biochemical studies were performed. There was a computed tomographic scan and fine needle aspiration. Statistical analysis of the data was conducted using the Statistical Package for Social Sciences.

RESULTS

In the current study, 24 out of 32 enrolled patients had parotid lesion and 8 had other salivary gland involvement.

Table 1: Patient's Characteristics

	N=32
Male	17 (53.12 %)
Female	15 (46.9 %)
Average age	51.4 years
Benign tumours	26 (81.2 %)
Malignant tumours	6 (18.8 %)

17 (53.12 percent) of the 32 patients were male and 15(46.88 percent) were female. No preponderance of sex existed. In this series, the average age was 51.45 years and no particular age group distress was observed. 26 (81.25 percent) of 32 patients were diagnosed with benign lesions and 6 (18.75 percent) had malignant lesions.

Table 2: Site of Lesion

Site of lesion	Benign (26)	Malignant (06)
Parotid	22	2
Palate	2	2
Sub-mandibular	2	2
Total	26	6

Of the 26 benign tumours in total, 22 were observed in the parotid gland and 2 in the palate and sub-mandibular gland, respectively. In the parotid palate and the sub-mandibular gland, 2 of the 6 malignant tumours were observed. In 4 patients, palpable cervical nodes that displayed metastasis were found. There was a superficial parotidectomy in all benign parotid cases. Mucoepidermoid carcinoma patient was treated with a total conservation parotidectomy, while skin tethering with neck nodes was treated with a radical parotidectomy with radical neck dissection and concomitant radiotherapy in one case. One person who had a radical parotidectomy suffered facial nerve palsy. One patient died as a result of distant metastases.

DISCUSSION

A thorough grasp of the clinical presentation and natural history of salivary gland neoplasms is necessary for accurate treatment. The radical management of big salivary gland tumours is based on surgery that is appropriate for their stage and histological diagnosis[9]. There are no well established risk indicators in adjuvant therapy patients that indicate an increased likelihood of local recurrence or distant metastases, or corresponding recommendations for enhanced treatment[10]. In 1874, Minssen first suggested the term benign mixed tumour to classify the two tumour components, mesenchymal and epithelial. In our sample, 26(81.25 percent) of the tumours were benign. In other studies, similar outcomes were also observed[11-15]. Unless proven otherwise,

any mass in the pre-auricular or infraauricular region should be known as a neoplasm. Parotid tumours have been observed to occur at any age. The primary basis of treatment for salivary gland tumours is surgery[16]. A superficial parotidectomy with facial nerve dissection and preservation is the normal medical treatment in the case of parotid gland tumours. In cases of benign or small malignant tumours confined to the superficial lobe of the gland, this procedure is often therapeutic. For any patient with salivary gland cancer, some studies recommend neck dissection, while others prefer selective neck dissection or neck irradiation only for high-risk cancers. Many of our parotid tumour patients had facial swelling on the lateral foot[17-20]. The presence or absence of pain in our research does not differentiate between benign and malignant lesions. There was no instance of facial palsy in our research and one formed the same after surgery. For severe lesions, CT fine needle aspiration biopsy and MRI may be used to know their exact extent. No single strategy has been shown to be superior due to the limited size of the studies on salivary gland tumours. Salivary gland cancer has a modest rate of regional lymph node metastasis when compared to other head and neck malignancies, ranging from 14 to 20%. Postoperative radiation has been shown to be beneficial in patients with salivary gland cancer who are at high risk of locoregional recurrence. Neutron beam radiation therapy has been demonstrated to be more effective in specific tumour histologies, including adenoid cystic carcinoma[21]. In other research, superficial parotidectomy was recommended for benign parotid tumours and the same was also done in our study. In the lesions affecting the sub-mandibular gland, the full sub-mandibular gland was resected. The entire sub-mandibular triangle was cleared of malignant sub-mandibular gland lesions. A large excision of the lesion with sufficient margins was treated for minor salivary gland neoplasms. In high-grade malignancies, tumours typically used for cisplatin radiation was used in combination with surgery. Similar findings were seen in other trials.

CONCLUSION

Owing to their prevalence and the need for extensive work by a multidisciplinary team of surgeons, salivary gland tumours may be treated in specialist head and neck clinics. The keystone of their leadership is surgery, as it serves both diagnostic and therapeutic purposes. Long-term follow-up is important for therapeutic effects to be reviewed. If the right diagnostic method and surgical procedures are used, the recurrence risk of benign tumours is small.

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