Mucoepidermoid carcinoma of tongue with cervical node metastasis a case report.

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Abstract: Mucoepidermoid carcinoma is a malignant epithelial neoplasm of salivary glands characterised by the proliferation of epidermoid,mucous and intermediate type cells in various proportion. They represent about 2-16 percent of all salivary gland tumors. Parotid is the most frequent site (45 percent) followed by Submandibular and Sublingual glands. Palate is the most common site along the distribution of minor salivary glands. Presentation of an enlarged metastatic cervical node with an occult tongue primary is very rare. This case report presents a mucoepidermoid carcinoma of tongue with cervical node metastasis in a 45 year old female. Very few cases of mucoepidermoid carcinoma of the tongue have been reported in literature. This case is presented for its rarity of site.


Introduction: Minor salivary glands are distributed throughout the oral mucosa except gingiva and hard palate. Salivary gland neoplasms are known to arise from these sites. Tongue is an unusual site for minor salivary gland Mucoepidermoid carcinoma.1 Mucoepidermoid carcinoma are thought to arise from the duct reserve cells of salivary glands. We report a 45 year old female with Mucoepidermoid carcinoma of tongue presented with a metastatic cervical lymph node.

Case report: A 45 year old female presented to the surgical OPD with an enlarged salivary gland with right cervical lymph node measuring 2.5x2cm. On examination patient also had an ulcer in the lateral aspect of tongue measuring 1.2cm. FNAC was performed on the node which showed a salivary gland neoplasm. An incision biopsy was performed on the tongue ulcer along with excision of the enlarged cervical lymph node. Both specimen were sent for histopathological examination.

Pathological findings: Grossly the tongue biopsy material was 1x1cm, pinkish gray mass and the excised node was measuring 2.5x2x2cm with pinkish white glistening cut surface. Microscopic examination of both tongue lesion and cervical node showed similar histological features with nest of tumor cells comprising of three distinct cells: Epidermoid cells, mucus cells and intermediate cells(Fig.1,2&3). The tumor showed predominance of mucus cells alternating with some intermediate cells forming glands and nests alternating with solid areas composed of epidermoid cells(Fig.2&3). There was no evidence of lymphatic invasion and necrosis. The tumor showed intense positivity for periodic acid Schiff stain in the mucous cellis(Fig.4). A diagnosis of low grade Mucoepidermoid carcinoma of tongue with cervical lymph node metastasis was made.

Discussion: Mucoepidermoid carcinoma of tongue presenting primarily as an isolated metastatic cervical lymph node is a rarely reported clinical entity. Inspite of its rarity, Mucoepidermoid carcinoma accounted for 35% among salivary gland tumors of tongue.2 Unlike squamous cell carcinoma which is one of the tobacco related cancers, Mucoepidermoid carcinoma has no definite etiological factors. Mucoepidermoid carcinoma of tongue is more common in females and during the fifth decades of life. This tumor usually present as a painless, fixed and slow growing mass.3 These tumors are generally classified into low grade, intermediate and high grade mucoepidermoid carcinoma. Regional lymph node metastasis,distant metastasis and local recurrences are common in high grade lesions.

In the two-tiered grading system, this tumor is categorised into low grade and high grade types depends on the presence or absence of invasive growth and solid architecture.7 The standard three-tier grading system categorises the tumor into low grade, intermediate and high grade types based on presence of cysts, mucinous cells, mitotic figures, cytology, metastasis and biologic potential.8

The Armed Forces Institute of Pathology(AFIP) scoring system offers good correlation with clinical outcome and high reproducibility. This grading system is based on five histological features: presence of intracystic component, neural invasion, mitotic figures, anaplasia and necrosis. Based on the total score a tumour is categorised as low grade, intermediate and high grade.8 Though the traditional two or three tiered grading system and AFIP grading system are popular prognostic classifications,8 Proliferating cell nuclear antigen (PCNA) is known to isolate an aggressive tumors.8,9 In the present case the Mucoepidermoid carcinoma characterized by an admixture of mucus, intermediate and epidermoid cells with expansile non infiltrative pattern of growth. The primary lesion was a small ulcerative proliferative type of growth with prominently enlarged metastatic cervical lymph node. Presence of lymph node metastasis in a low grade tumor suggest the possibility of early progression. The clinical behaviour of such tumor and treatment modalities are highly variable.
Reference:

Figure 1: Photomicrographic picture from tongue biopsy shows nest of mucus cells and intermediate cells. (H& E X 100x)

Figure 2: Photomicrographic picture from tongue biopsy shows nest of intermediate and mucus cells. (H& E X 100x)

Figure 3: Photomicrographic picture from cervical node shows nest of intermediate and Epidermoid cells. (H& E X 100x)

Figure 4: Photomicrographic picture shows intense PAS positivity in mucus cells. (H& E X 100x)