Case Report:

Large cell carcinoma lung presenting as a Lingual mass

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Abstract:
Metastatic tumors of the oral cavity, particularly in the tongue are rare and occur mostly in patients with generalized dissemination of a primary malignancy. Lingual metastases as the initial presentation of a metastatic carcinoma is extremely rare. We report a case of a 60 year old male patient who presented with metastasis from large cell carcinoma lung in the tongue, which was diagnosed by FNAC.

Keywords: Large cell carcinoma, metastasis, FNAC

Introduction:
Primary carcinomas of the tongue are fairly common accounting for about 50% of all oral carcinomas, but carcinoma metastatic to the oral cavity is quite uncommon (1.0%). Most metastasis are located in the mandible; however the adjacent oral mucosa may be involved secondary to direct extension of metastatic disease within the bone. Lingual metastasis during the natural course of any neoplasm including lung cancer is extremely rare. Reported incidences vary between 0.2 to 1.6%. Similar to the primary tumours of the tongue, metastatic lesions to this region may be ulcerated or polypoidal and may even mimic an abscess. Since the tongue is a rare metastatic site a thorough evaluation to distinguish metastasis from primary neoplastic and reparative lesions should be made.

Case report:
A 60 year old male patient presented in the dentistry department of our hospital with history of dysphagia and a rapidly enlarging mass in the tongue. He also gave history of chest pain, low grade fever, malaise and weight loss for the past one month which he had attributed to dysphagia. On further interrogation it was found that he was an occasional smoker. Local examination of the oral cavity revealed poor oral hygiene along with an exophytic mass measuring 2.0x1.2x1.2 cms involving the base and adjacent right lateral border of tongue (Fig.1). There were no palpable lymph nodes. A chest X-ray was done which showed a mass on the right side. Fine needle aspiration cytology (FNAC) was done from the mass on tongue in the OPD as it was accessible and an endobronchial FNAC was also performed from the lung mass. FNA from the tongue mass yielded a blood mixed aspirate. The smears were moderately cellular and showed groups of as well as singly scattered highly pleomorphic tumour cells with abundant cytoplasm and polymorph ingestion in some of them (Fig.2). Tumour giant cells were also seen in a haemorrhagic background of degenerated inflammatory cells and areas of necrosis. The endobronchial FNAC smears from lung mass revealed similar morphology and was suggestive of poorly differentiated large cell carcinoma of lung (Fig.3). Based on the FNAC findings from both the lesions, a diagnosis of metastasis in tongue from
large cell carcinoma of lung was made. The patient was treated with radiotherapy and systemic chemotherapy but he eventually died during the course of treatment.

[Fig. 1: Photograph showing tongue growth.]

[Fig. 2: FNAC smears from tongue mass, Giemsa 400x. and Fig. 3: Endobronchial FNAC smears from lung lesion Giemsa 200x.]

**Discussion:**
Primary carcinomas of the tongue account for nearly 50% of oral carcinomas. However, primary tumours metastasizing to the tongue are very unusual with an incidence rate of 0.2 to 1%. The common primary sites resulting in lingual metastases are the lungs, pleura (mesothelioma) bronchus, oesophagus, colon, breast, adrenal gland, kidney, endometrium and skin (melanoma). Metastases of pulmonary tumours may be seen months after diagnosis of the primary diseases, or on autopsy. But tongue metastasis as the presenting manifestation is extremely rare. Zegarelli et al reported 12 cases of tongue metastasis in necroscopies performed on patients with malignancies. In 66% of these cases metastases were localized to the base of the tongue. This could be because the base of the tongue has rich lymphatic supply or due to relative immobility of the tongue base as compared to other parts of the tongue. Rare incidences of tumours metastasizing to the anterior and lateral borders of the tongue while sparing the base have also been reported.

Possible routes of metastatic spread are arterial, venous and lymphatic circulation. Review of literature shows that all the types of pulmonary malignancies can metastasise to the tongue including squamous cell carcinoma, adenocarcinoma, large cell carcinoma etc. The gross appearance of a metastatic tumour may be identical to the primary tumour and can vary from friable and ulcerated to polypoidal or pedunculated. Presentation with acute symptoms is uncommon for tongue tumours but haemorrhage into the lesion may cause such acute symptoms. These patients generally present with nodular, indurated and rapidly enlarging masses in the oral cavity resulting in dysphagia, dysarthria or hoarseness of voice. The differential diagnosis includes primary neoplasms of the tongue, cysts, infarction, localized acute and chronic inflammatory disease and metabolic diseases (amyloidosis, vitamin B-12 and iron deficiencies). Biopsy is the routine investigation performed in these lingual masses, FNAC should be attempted if the lesion is accessible. FNAC is less traumatic, provides quicker diagnosis and since these patients have poor prognosis and are treated with palliative intent symptomatic treatment can be instituted at the earliest to improve the quality of life in such patients. Finally considering that metastatic tumours do not clinically differ from primary tongue cancers it is crucial to consider this possibility in these patients even without known primary because these can also be the initial presentation.

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Primary carcinomas of the tongue account for nearly 50% of oral carcinomas. However, primary tumours metastasizing to the tongue are very unusual with an incidence rate of 0.2 to 1%. The common primary sites resulting in lingual metastases are the lungs, pleura (mesothelioma) bronchus, oesophagus, colon, breast, adrenal gland, kidney, endometrium and skin (melanoma). Metastases of pulmonary tumours may be seen months after diagnosis of the primary diseases, or on autopsy. But tongue metastasis as the presenting manifestation is extremely rare. Zegarelli et al reported 12 cases of tongue metastasis in necroscopies performed on patients with malignancies. In 66% of these cases metastases were localized to the base of the tongue. This could be because the base of the tongue has rich lymphatic supply or due to relative immobility of the tongue base as compared to other parts of the tongue. Rare incidences of tumours metastasizing to the anterior and lateral borders of the tongue while sparing the base have also been reported. Possible routes of metastatic spread are arterial, venous and lymphatic circulation. Review of literature shows that all the types of pulmonary malignancies can metastasise to the tongue including squamous cell carcinoma, adenocarcinoma, large cell carcinoma etc. The gross appearance of a metastatic tumour may be identical to the primary tumour and can vary from friable and ulcerated to polypoidal or pedunculated. Presentation with acute symptoms is uncommon for tongue tumours but haemorrhage into the lesion may cause such acute symptoms. These patients generally present with nodular, indurated and rapidly enlarging masses in the oral cavity resulting in dysphagia, dysarthria or hoarseness of voice. The differential diagnosis includes primary neoplasms of the tongue, cysts, infarction, localized acute and chronic inflammatory disease and metabolic diseases (amyloidosis, vitamin B-12 and iron deficiencies). Biopsy is the routine investigation performed in these lingual masses, FNAC should be attempted if the lesion is accessible. FNAC is less traumatic, provides quicker diagnosis and since these patients have poor prognosis and are treated with palliative intent symptomatic treatment can be instituted at the earliest to improve the quality of life in such patients. Finally considering that metastatic tumours do not clinically differ from primary tongue cancers it is crucial to consider this possibility in these patients even without known primary because these can also be the initial presentation.
References:


