

Metastatic Renal Cell Carcinoma Initially Presented as a Tongue Mass

Dilde Kitle ile Ortaya Çıkan Metastatik Renal Hücreli Karsinom

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ABSTRACT

Renal cell carcinoma is one of the most common tumours after lung and breast cancer to metastasize to the head and neck. Initial presentation by tongue metastasis is extremely rare. A 67-year-old-male presented with a 4.8 cm mass on his tongue. The result of the punch biopsy from the tongue was diagnosed as a clear cell variant of squamous cell carcinoma. The biopsy was reevaluated due to the renal mass found during the check-up and the rapid enlargement of the mass. The excision of the tongue mass and the radical nephrectomy material confirmed the diagnosis of a metastatic renal cell carcinoma in the tongue and renal cell carcinoma in the kidney. Since metastasis of renal cell carcinoma to the tongue is uncommon it may cause difficulties in diagnosis and proper management. The metastasis of renal cell carcinoma should always be considered in the differential diagnosis among the clear cell neoplasms.

Key Words: Renal cell carcinoma, Metastasis, Tongue

ÖZ

Baş ve boyun bölgesine renal hücreli karsinom metastazı meme ve akciğer tümörlerinden sonra en sık olarak görülür. Dil metastazı ile bulgu vermesi ise çok seyrek. 67 yaşında erkek hasta dilde 4,8 cm çapında kitle ile başvurdu. Dilden alınan insizyonel biyopsi sonucu berrak hücre varyant skuamöz hücreli karsinom yönündeydi. Görüntüleme yöntemiyle böbrekte kitle saptanması ve dil kitlesinin çok hızlı büyümesi nedeniyle biyopsi yeniden incelendi. Böbrek tümörü metastazının öncelikle düşünülmesi üzerine, kitlenin total eksizyonu sonrası ve immünohistokimyasal yöntemin desteğiyle, radikal nefrektomideki tümör ile aynı nitelikte, dile metastatik berrak hücreli renal hücreli karsinom tanısı konuldu. Renal hücreli karsinomun dile metastazı ender olması nedeniyle doğru tanı ve tedavide zorluklara yol açmaktadır. Dilde ortaya çıkan berrak hücreli neoplaziler arasında renal hücreli karsinom metastazı ayırıcı tanıda akıldta tutulmaktadır.

Anahtar Sözcükler: Renal hücreli karsinom, Metastaz, Dil

INTRODUCTION

Metastases to the tongue from distant primaries are exceedingly rare; their prevalence accounts for only 0.2% of 6881 cases of all malignant diseases (1). Lung, kidney, skin and breast are the most common metastatic sites for primary malignancies that produce metastases to the oral cavity. Renal cell carcinoma (RCC) is one of the most common types of metastasis found in the oral cavity with gingiva, tongue, palate, and lips as the favored sites. Only anecdotal cases have presented initially with tongue metastasis before the diagnosis of primary renal cell carcinoma. The current report describes a case of metastatic clear cell renal carcinoma that initially presented with a tongue mass.

CASE REPORT

A 67-year-old male was admitted to the ENT Clinic of the İzmir Tepecik Training and Research Hospital for a rapidly swelling tongue lesion located on the deep posterior region of the tongue. Oral examination revealed a large, irregular, fungating, reddish-blue, 4.8 cm mass in the deep third of the dorsum of the tongue (Figure 1). Indirect examination of the hypopharynx and larynx showed no obvious lesions. No cervical lymphadenopathy was palpated. An incisional biopsy was taken from the tongue and diagnosed as a squamous cell carcinoma, clear cell variant. The tongue lesion doubled in size within two weeks. Due to the progressive enlargement of the tongue mass, metastasis from RCC

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Figure 1: Gross appearance of the irregular, fungating 4.8 cm mass on the deep third of the dorsum of the tongue.

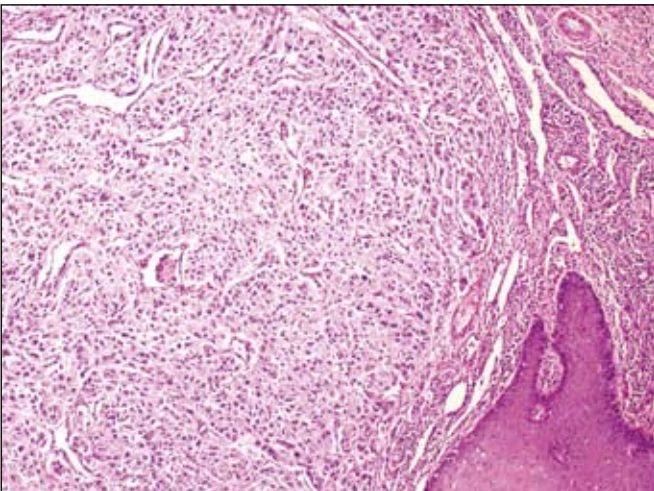


Figure 2: Tongue mass showing infiltrative nests and sheets of neoplastic cells with clear cytoplasm separated by thin fibrovascular septa (H&E, x100).

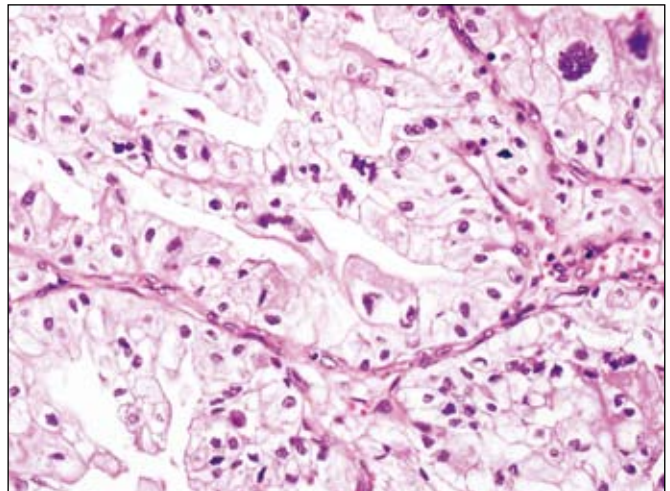


Figure 3: Renal mass showing infiltrative nests and sheets of neoplastic cells with clear cytoplasm separated by thin fibrovascular septa (H&E, x400).

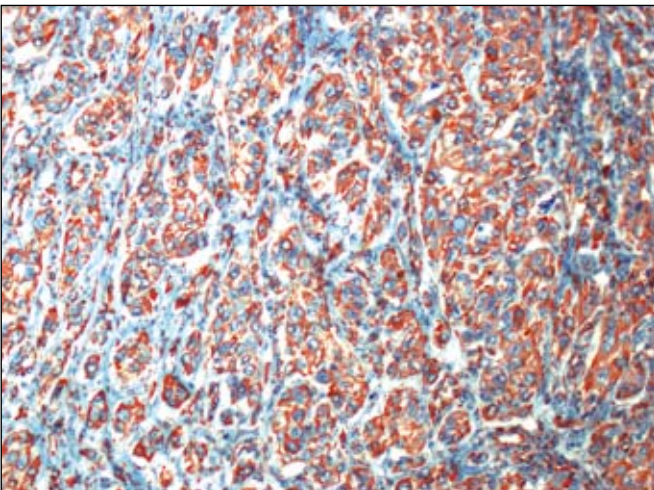


Figure 4: Vimentin positivity of the tongue mass (x200).

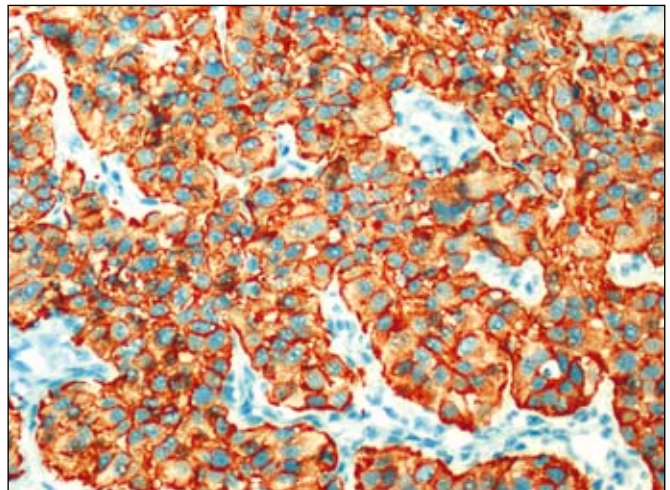


Figure 5: Pan-CK positivity of the tongue mass (x400).

was included in the differential diagnosis from squamous cell carcinoma with clear cell change. A systemic work-up was performed although the patient had not described any suspicious urinary symptoms. The blood test including renal functions were normal. The abdominal CT showed a 9 cm tumoral mass in the right kidney. Subsequently, the slides from the tongue biopsy were reevaluated and reported as metastatic RCC of the tongue. Urology consultation advised the tongue mass to be removed first. Excision of the tongue was performed. On microscopical examination, the mucosa showed focal ulceration. There was no relationship between the surface of the mucosa and the lesion which was located in the underlying tissue. The lesion was composed of infiltrative nests and sheets of neoplastic cells with clear

cytoplasm. These nests were separated by thin fibrovascular septa. (Figure 2). The neoplastic cells showed moderate nuclear atypia. The vascular invasion within the tumor and peritumoral area was significant. Immunohistochemical vimentin, CD-10, pan-CK, EMA and S-100 positivity confirmed the diagnosis (Figure 4,5). When the radical nephrectomy was performed, the microscopic and immunohistochemical features were identical with the tongue mass as RCC, clear cell variant (Fuhrman Grade II) (Figure 3). A 1.5 cm-mass in the upper lobe of the left lung on thorax CT and a 3.5-cm-mass in the surrenal gland on abdominal CT were identified as disseminated metastasis of RCC. No other metastases were found in the liver, spleen, bones and CNS. The patient was subsequently treated with interferon-alpha (dose: 3MU, three times a week) as a systemic treatment for his metastatic disease.

DISCUSSION

Tumor metastases to the oral cavity are exceedingly rare. In one study, carcinoma of the lung with tongue metastasis made up 1.6% of 3047 cases (2). In another study, the incidence of tongue metastasis was 0.2% among 6881 cases of malignant tumors (1). RCC is one of the most common tumours after lung and breast cancer to metastasize to the head and neck region. RCC's show multiple metastasis to the head and neck region in almost 15% of cases (3,4). Tongue metastasis as an initial presentation of RCC is extremely rare. Azam et al. reported following a review of the literature that only 4 cases had been published since 1911 (5-8). The case we present seems to be the fifth case of RCC initially presenting with tongue metastasis in the literature. After the RCC diagnosis of our patient, lung and left scapula metastases were also found and treatment consisted of left radical nephrectomy and interferon therapy (7).

Metastasis to the tongue due to a primary RCC was also found and treated with interferon-alpha in another case report and the metastatic mass disappeared completely after the systemic treatment (9).

Arterial, venous and lymphatic flow are the potential thoroughfare of metastasis to the tongue (3). Metastases are often observed on the base more than other parts of the tongue because of the tremendous vascular supply (10,11).

RCC penetrates the vessels of the kidney and accesses the systemic circulation. Head and neck metastases are mostly related with lung metastases as in the current case. Spread via Batson's venous plexus can be a possible route for the metastasis to tongue if no signs of pulmonary disease are identified (4).

In conclusion, various entities should be kept in mind in clear cell lesions in the head and neck location. The initial diagnosis in this case was squamous cell carcinoma but the neoplasm of the tongue was reevaluated and diagnosed as metastasis to the tongue after the detection of the primary tumor in the kidney. Metastatic carcinomas must be considered to avoid a misdiagnosis.

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