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Metastatic Hepatocellular Carcinoma To Oral Soft Tissue; A Case Report

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ORIGINAL

Introduction

Hepatocellular carcinoma comprises approximately 90% of primary cancers of the liver. Unfortunately, it carries a grave prognosis (1). There was been a well-known association between chronic liver diseases and Hepatitis infection which are Hepatitis C and Hepatitis B. In addition, alcohol sue, aflatoxin B1, autoimmune hepatitis, steatohepatitis, and primary biliary and sclerosing cholangitis are known to be important etiological agents (2). Extrahepatic metastasis occurs in about 30-50% of patients (2; 3). They are commonly affecting the lungs, abdominal lymph nodes, diaphragm, and skeleton (4). However, metastasis of hepatocellular carcinoma to the oral cavity is uncommon, based on the fact that tumours of the oromaxillofacial region are mainly primary in origin whereby metastatic cases account for only 1% (5). In regards to the incidence of metastatic hepatocellular carcinoma to the head and neck, it frequently involves the mandible, with gingiva being the second. These metastatic deposits are believed to follow hematogenous spread by the primary tumour (5).

Case Report

A 71-year-old man presented with a two-month history of progressively increasing the size of his oral cavity mass and occasionally bled upon oral feeding. Almost concurrently, he experienced abdominal distension, worsening jaundice, and significant constitutional symptoms. He was a smoker but not taking any alcohol or chewable recreational materials.

Generally, he was cachexic and deeply jaundiced. Oral cavity assessment demonstrated a right posterior lower alveolar mass which measures 3 x 4 cm exophytic, irregular, and ulcerated lesion, which is associated with palpable right cervical lymphadenopathy. Abdominal examination revealed painless hepatomegaly with bilateral lower leg pitting oedema.

Contrasted CT staging showed a large heterogenous right liver necrotic mass largest measuring 11.8 x 11.6 x 12.3 cm with a scattered liver lesion in bilateral lobes. There was also an associated tumour rupture on the right liver with a large arterioportal shunt is suggestive of hepatocellular carcinoma. In addition, a large right mandibular mass measuring 5.3 x 5.7 x 6 cm with intra and extra-oral extension with local infiltration and right cervical lymphadenopaties were also apparent. The advanced disease was further proven by the presence of extensive regional and distant nodes, spine, lungs, and brain metastasis.

Histopathological examination of the right retromolar soft tissue was consistent with metastatic hepatocellular carcinoma evidenced by the presence of malignant cells arranged in a polygonal

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shape. Immunohistochemically, the malignant cells show diffuse positivity for Hep Par-1 and Glypican-3 but are negative for alpha-fetoprotein.

Serum Alpha-fetoprotein was markedly raised with the positivity of the Hepatitis C profile. Hence, the diagnosis of advanced hepatocellular carcinoma secondary to Hepatitis C infection with was established.

In addition to the grave prognosis, he was unfit for chemotherapy and subjected to palliative care. Intermittently he was admitted to our oncological suit for pain and bleeding from the oral mass requiring mechanical compression, suture, and even haemostatic radiotherapy.

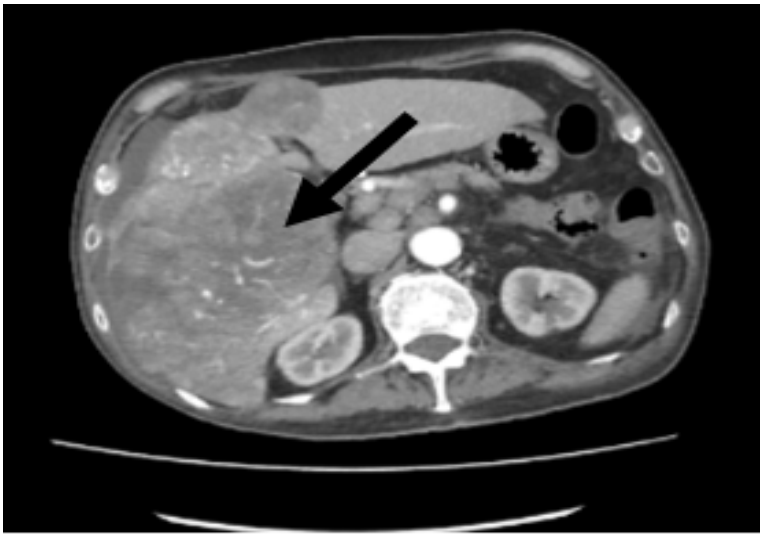

Figure 1. Large heterogenous enhancing mass in the right liver with hypodence necrotic component. Capsular breach at segment VI was suggestive of tumour rupture.

Figure 2. Bleeding from the right mandibular metastatic tumour of hepatocellular carcinoma.

Discussion

Hepatocellular carcinoma (HCC) is most frequently found in men, with oral metastasis typically presenting clinically as an ulcerated symptomatic mass. The frequent occurrence of oral metastasis is at the mandible and gingiva, particularly at the posterior region, the angle, and the ramus,

attributed to the presence of haematopoietic tissues in this region (4). This is parallel with the case that we reported here.

The possible pathophysiological mechanism of HCC to the oral cavity remains to be revealed. Hematogenous route through a hepatic artery or portal vein is thought to be the preferred pathway for oral metastasis (6). Due to the fact that more than half of cases of HCC are associated with liver cirrhosis, it has been postulated that changes in haemodynamics in relation to esophageal varices make it a potential pathway to the oral cavity (6).

During the histopathological examination, routine haematoxylin and eosin-stained section may give a clue towards the hepatic origin. However, an immunohistochemical study is often needed to verify the metastatic HCC from other variants of oral metastatic tumours. 30% metastatic tissues may have positive alpha-fetoprotein (4) which did not happen in our case. On another occasion, the Hep Par-1 monoclocal antibody has known reactivity to benign and malignant cells of hepatocyte origin and also yields significant diagnostic value. The Hep Par-1 assay is sensitive and specific for HCC by 90% whereas the remaining portion is attributed to metastatic adenocarcinoma (4). The second parameter which is also exclusive for HCC is Glypican-3. It is a variety of oncoproteins that are involved in the growth of most HCC. Immunoreactivity increases with poorer tumour differentiation which supplements the staining pattern of Hep Par-1 (1). In conjunction with the case report that we described here, his tissue immunohistochemical analysis has proven the diffuse positivity towards Hep Par-1 and Glypican-3.

A literature review analysis carried out by Hou et al. (2019) has found that patients with an oral mass as the first sign of HCC had a grave survival rate (6). This is because a majority of them already had multiple extrahepatic metastasis at the time of detection, leading to the subsequent poor surgical observation mainly due to the delayed diagnosis (6). Parallel with the case that we report here, the initial CT staging at the time of presentation already demonstrated extensive metastasis and subsequently poor outcome.

Conclusion

Oral metastatic hepatocellular carcinoma needs to be included in the differentials of rapidly growing oral lesions. It is especially true in patients with underlying Hepatitis infection or patients with stigmata of chronic liver disease. Comprehensive clinical, radiological, and histopathological evaluation is crucial in determining the diagnosis. Yet, the survival rate and prognosis of this condition are still in dismal.

Conflict Of Interest

All authors declare no conflict of interest of any kind.

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