

A rare case of hepatocellular carcinoma presenting as a bone metastasis in the left sternoclavicular joint

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Summary

A 65-year-old male presented with a pulsatile lump on the anterior chest wall. On imaging, the lesion was confirmed to be a bone eroding soft tissue mass suggestive of a metastatic deposit. Computed Tomography (CT) scan of the abdomen confirmed the presence of a hepatocellular carcinoma with typical enhancement pattern confirming the lump as a bone metastasis.

Keywords - hepatocellular carcinoma, bone metastasis

Introduction

Hepatocellular carcinoma (HCC) is the sixth most common cause of cancer deaths worldwide¹ and its incidence is particularly high in Asian countries². Extra-hepatic metastases have been reported to occur in 13.5% - 42% of HCC patients³. Presentation of HCC with bone metastasis in the sternoclavicular joint is rare. This describes a unique case of bone metastasis that presented as a pulsatile lump in the left sternoclavicular joint.

Case Report

A 65-year-old male presented with a lump on the anterior chest wall, that progressively increased in size over the last 2 months. He was diagnosed of having Child class A cirrhosis 5 months before. On examination he had a 4 cm hard lump attached to the underlying left sternoclavicular joint. The lump was non - tender and pulsatile (Figure 1a and 1b).

On general examination, there were no enlarged lymph nodes or peripheral stigmata of chronic liver disease.

Ultrasound scan of the neck revealed a 3.5cm x 2.9cm heterogeneously echogenic suprasternal soft tissue mass with internal vascularity. Contrast Enhanced Computed Tomography (CECT) scan of chest and abdomen showed a heterogeneous vascular mass eroding into the sternoclavicular joint. Further, there were multiple focal lesions in the liver with typical arterial enhancement and venous washout, diagnostic of hepatocellular carcinoma (Figure 2a and 2b).



Figure 1a - Lump on left sternoclavicular joint, anterior view



Figure 1b - Lateral view

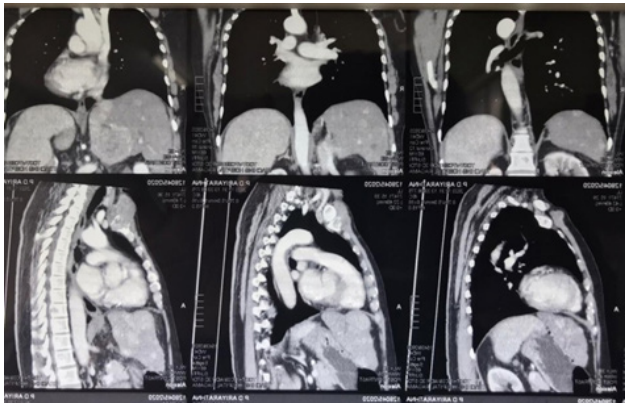


Figure 2a - CECT scan of chest and abdomen with multiple focal lesions in the liver, sagittal view.



Figure 2b - Transverse view

Discussion

HCC is the most common primary tumour of the liver. It is a highly invasive tumour and distant metastases are not uncommon. A study carried out by Katyal et al. concluded that metastases from HCC had been observed in about 4 - 20% of patients with HCC, while the most common sites of extrahepatic metastasis included lungs (55%), abdominal lymph nodes (41%) and bone (28%)³

Skeletal metastasis of HCC occurs less frequently when compared with other cancers and is considered a rare primary form of presentation⁴. Skeletal metastasis appears to be unique among various haematogenous metastasis of HCC because it can occur before clinical manifestations of liver disease and is usually symptomatic, as in the present case. The most common sites of bone metastases are the spine and ribs⁵.

The literature documents a modest number of isolated reports, most of which involve bone metastasis to vertebrae. Results from a study carried out by Okazaki et al. concludes that bone metastasis is found rarely in sternum (7%) and clavicle (7%)⁶. Therefore this case is unique as it is a very rare presentation of a primary HCC as metastasis in the sternoclavicular joint.

HCC survival depends on the stage at diagnosis. AJCC (American Joint Committee on Cancer) staging system has shown to provide the best stratification of prognosis in patients with HCC undergoing liver transplantation, with the 5 year survival rate⁷. HCC is frequently diagnosed late in its' course ,because of the absence of symptoms. As a result, many patients have untreatable disease when first diagnosed.

The prognosis of patients with extrahepatic metastases is generally very poor. Natsuizaka et al. reported a 1-year survival rate of 24.9% and median survival period of 7 months in patients with extra hepatic HCC⁸.

Radiotherapy has been reported as effective in palliating painful bone metastases, with partial pain relief reported in 80% to 90% of patients⁹. A study done by Jian He et al on treatment of HCC with bone metastasis with palliative radiotherapy revealed better survival and pain improvement compared to previous studies⁵. This patient too was treated with palliative radiotherapy.

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