A rare presentation of osseous metastasis in Hepatocellular Carcinoma (HCC) on bone scintigraphy

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Abstract
Bone metastases in HCC are uncommon with an incidence of 3% to 20%.1 Screening for bone metastasis is not a routine practice. Diagnosis is often delayed, and usually made once symptoms develop.

Keywords: Hepatocellular carcinoma, Bone metastasis, Bone scintigraphy.

A 56-year old male with HCC for one year; developed left buttock pain radiating to left leg for 2 months. Diagnosis of sacroiliitis was established but intra-articular steroid did not give relief. A three phase bone scan with SPECT/CT was performed to find pain generator. After intravenous injection of 750MBq of Tc99m flow and blood pool images of lumbar sacral spine and pelvis (a) displayed minimal hyperaemia and increased blood pool activity in left iliac fossa. Delayed whole body planar images (b) showed mild focal radiotracer uptake in 1st rib (black arrow) and photopenia in left iliac blade (red arrow). SPECT-CT images of pelvis (c) demonstrated a left pelvic sidewall mass eroding the iliac bone, and in upper thoracic region (d) a similar destructive lesion was seen in right 1st rib. This confirmed metastases on bone scintigraphy and later proved histopathologically.

In HCC, incidence of lower-thoracic and lumbar metastasis is high due to formation of collaterals between portal and systemic circulation.2 Soft tissue mass formation is a prominent characteristic of bone metastasis.3 Most common radiographic feature is an osteolytic lesion, either replaced or invaded by soft tissue mass causing compression syndrome. Extra attention should be paid when analyzing bone metastasis, to avoid false negative results.2

References