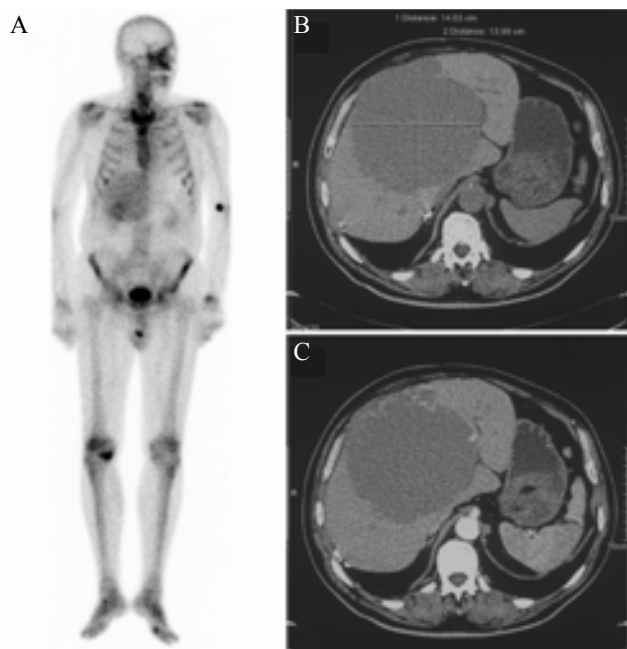


Unusual bone scan finding: Gigantic hepatic hemangioma visualized on bone scintigraphy



Bone scan was performed a 77 years old man with prostatic carcinoma. The planar 3h ^{99m}Tc -methylendiphosphonate (MDP) whole-body bone scan did not reveal skeletal metastases. However, on the anterior view, unexpected, large, round shaped activity in the liver projection was noted (Panel A). Further investigation disclosed that the patient had been operated for hepatic hemangioma thirty years ago. Computed tomography (CT) with contrast enhancement revealed a large hemangioma without calcifications 14cm in diameter (Panels B and C). Despite this large hepatic mass, he had no gastrointestinal or abdominal symptoms. Physical examination revealed prominence of inferior liver margin two fingers below the right costal margin. Laboratory liver function tests were normal. After surgeon's consultation no further investigation or treatment was indicated. Hemangiomas are benign hepatic tumors, mostly of the cavernous variety and represent the second overall most common hepatic masses with an autopsy-proven prevalence of 5% to 10%. They consist of large, thin-walled blood vessels, lined with flattened epithelium and separated by fibrous spaces, filled with venous blood [1]. On three phase scintigraphy with labeled red blood cells a decreased perfusion and increased activity on delayed blood pool scintigrams, i.e. perfusion/blood-pool mismatch is the key diagnostic sign [1]. Accumulation of bone-scanning radiopharmaceuticals in the liver is mostly due to metastatic or primary liver malignancies [2]. There are only few reports

of hepatic hemangiomas that were visualized on bone scintigraphy [3-5], and only one of these [3] was with clear visualization like in our patient. The mechanism for accumulation of ^{99m}Tc -MDP within hemangiomas in these cases is not well known. Since no apparent calcification in the hemangioma was diagnosed by the CT scans, we hypothesize that this hemangioma, having large venous blood pool volume and slow wash out rates, had retained enough ^{99m}Tc -MDP before it was accumulated in the bones or cleared by the kidneys, and could thus be visualized on the 3-hour bone scan [6].

The authors declare that they have no conflicts of interest.

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Hell J Nucl Med 2012; 15(3): 260 Published on line: 2 December 2012

