Hepatic Haemangioma: A Diagnostic Dilemma with an Easy Solution
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Introduction
Hepatic Haemangioma is the most common benign liver tumour. There are two types of haemangiomas: capillary haemangioma and cavernous haemangiomas. The term “giant haemangioma” is reserved for lesions larger than 5 cm. Given the abundance of vascular structures around the liver, SPECT/CT hybrid imaging with 99mTc labelled Red Blood Cells (RBCs) constitutes an excellent modality for localization and characterization of hepatic haemangiomas.

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Discussion
A 79 year old male was referred for 99m-Tc labelled red blood cell (RBC) imaging for the characterisation of a large hepatic incidentaloma discovered on MRI. Patient was injected with 770MBq of 99mTc RBC. After initial dynamic and static images, he underwent SPECT/CT of abdomen for better localisation of the lesion seen on planar images. Hepatic haemangioma has a prevalence of 3-20% in the general population.1 Most lesions are asymptomatic and discovered as “incidentalomas” on routine imaging. However, large lesions (>10 cm) may present with upper quadrant pain due to distention of the Glisson’s capsule, haemorrhage, infarction or torsion.1,2 Hybrid 99m-Tc RBC with SPECT/CT scan is a valuable tool for localizing and characterising haemangiomas, specifically in regions with multiple large vascular structures like the hypochondria and thorax.3

Figure: Initial dynamic (A) and static images (B) show focal increased tracer uptake in hepatic segment VI/VII (B, green arrow). Unenhanced axial (C) and coronal (D) images showed an ill-defined avid involving segment VI/VII (green circle) which measured 10.3 cm in maximum dimensions. This lesion showed increased tracer uptake as seen on fused axial SPECT/CT (E) and coronal (F) images (green circles).
Historically, $^{99m}$Tc RBC scan has been used as an effective, simple, noninvasive yet specific imaging modality for differentiating haemangiomas from other hepatic lesions.¹ Conventional radiological imaging such as MRI is occasionally not able to differentiate between these hyper vascular lesions and malignancy or focal nodular hyperplasia. However, $^{99m}$Tc RBC scan with SPECT/CT can solve this diagnostic dilemma in many such cases.² This holds especially true for lesions greater than 2 cm in which sensitivity of $^{99m}$Tc RBC scan with SPECT/CT is comparable to that of MRI.³ This was seen in our patient in whom conventional radiological modalities were not conclusive. However, $^{99m}$Tc RBC scan with SPECT/CT effectively characterised this lesion as haemangioma. Therefore, $^{99m}$Tc RBC scan with SPECT/CT still plays an important role in these patients in whom undue potentially fatal biopsies of these hyper vascular lesions can be avoided.

References
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