False-Negative Tc-99m RBC Liver Scintigraphy in Giant Hepatic Cavernous Hemangioma

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Hepatic cavernous hemangioma (HCH) is the most frequently seen benign liver lesion, with an incidence of 0.4% to 7.3%. Tc-99m RBC liver scintigraphy provides high rates of sensitivity and specificity in the investigation of HCH. Although false-negative results in small lesions have been reported (less than 2-3 cm), false-negative results in giant HCH have rarely been discussed. (Mid Taiwan J Med 2003;8:114-7)

**Key words**

false-negative, giant hepatic cavernous hemangioma, Tc-99m RBC liver scintigraphy

**INTRODUCTION**

Hepatic cavernous hemangioma (HCH) is the most common benign neoplasm of the liver [1]. Most HCHs are found incidentally on sonography or with other imaging methods. Distinguishing HCH from other hepatic masses is a relatively common clinical challenge. Although several imaging methods have been used to accurately evaluate HCH, such as sonography, computed tomography (CT) and Tc-99m RBC liver scintigraphy [2-11] the sonographic appearance of HCH is not specific and cannot be distinguished from other liver masses, such as hepatocellular carcinoma and metastases [10]. CT scan has been reported in several articles to be a relatively poor imaging technique for diagnosing HCH [5,12,13]. However, Tc-99m RBC liver scintigraphy has provided high rates of sensitivity and specificity in the evaluation of HCH [8,14], although false-positive results have been reported [15-17]. Its sensitivity for HCH lesions less than 2 to 3 cm in diameter is also limited [5,17,18] and false-negative results are not uncommon. In the current report, we present a rare case of a false-negative result by Tc-99m RBC liver scintigraphy in a giant HCH (6 cm × 7 cm).

**CASE REPORT**

A 47-year-old woman was referred to us for evaluation of a large mass (6 cm × 7 cm) in the left lobe of liver noted on abdominal sonography. She had been in good health until 2 weeks prior to admission to this institution when she noted episodic abdominal fullness and pain. She denied jaundice or change in bowel habits. She had no special medical history. She neither drank alcohol nor used intravenous drugs. There was no family history of liver disease. Liver function tests and serum AFP were within normal limits. Tc-99m RBC liver scintigraphy was performed because HCH was highly suspected. Tc-99m RBC liver scintigraphy was performed by in vivo labeling of erythrocytes via intravenous injection of pyrophosphate 20 minutes before injection of 20 mCi Tc-99m pertechnetate. The blood pool image...