

The use of SPET-CT and ^{99m}Tc sulphur colloid to image peritoneo-pleuric shunt and the thoracic duct in a patient with liver insufficiency and ascitis

Technetium-99m sulphur colloid (^{99m}Tc -SC) scintigraphy is a commonly used method in the assessment of peritoneo-pleuric leak in cases of liver insufficiency [1-4]. A 40 years old patient with alcoholic cirrhosis liver insufficiency, ascitis and hepatic encephalopathy was severely dyspnoic due to large right sided pleural effusion. A ^{99m}Tc -SC peritoneo-pleuric scintigraphy was performed. A 1.5 inch 22 guage needle was inserted into the peritoneal cavity at the site of dullness, as identified by percussion and ascetic fluid was withdrawn. A dose of 185MBq of ^{99m}Tc -SC was instilled into the peritoneal cavity through the same needle. The thoracic and abdominal planar images in anterior (A) and posterior (B) views were acquired 24h after tracer administration with the help of a SPET/CT-16 slices CT gamma camera (Siemens Symbia T, Germany), which showed diffuse tracer accumulation within the right hemithorax confirming communication between the

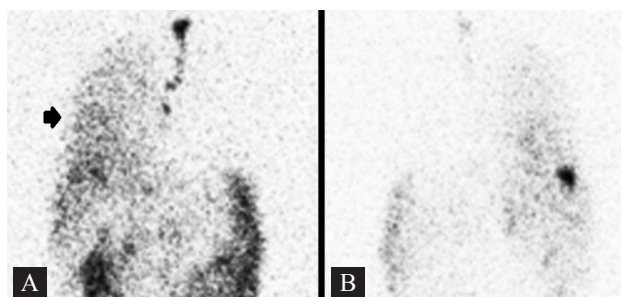


Figure 1. The thorax and abdomen planar images in the anterior (A) and posterior view (B) taken at 24h after the infusion in the peritoneal cavity of 185MBq ^{99m}Tc -sulphur colloid showed diffuse tracer accumulation within the right hemithorax (arrow). This image suggested peritoneo-pleural communication and hydrothorax.



Figure 2. The SPET/CT images of the thorax indicate the midline curvilinear tracer uptake of the thoracic duct (arrow).

ascitic fluid and pleural effusion (Fig. 1). A curvilinear track of intense tracer uptake was noted in the middle and left side of the thorax. Single photon emission tomography/CT (SPET/CT) images of the thorax acquired at 24h demonstrated that this tracer activity was the thoracic duct (Fig. 2). The limited resolution of planar scintigraphy did not allow precise anatomical localization of the tracer activity but drainage to the thoracic duct was obvious on the SPET/CT scan. This case highlights the potential usefulness of SPET/CT in precise anatomical localization of tracer activity when planar imaging is inconclusive [5].

The authors declare that they have no conflicts of interest.

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