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IMAGE OF THE MONTH

Incidental pulmonary embolism detected on workup for Y-90 SIRT

Lenith Tai Jit Cheng[1] · Hian Liang Huang[1]

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Intra-arterial ^{99m}Tc macroaggregated albumin (MAA) scintigraphy and SPECT/CT are routinely performed for assessment of liver-to-lung shunting as well as pre-therapy dosimetry prior to Y-90 SIRT (SIR-Spheres ^{90}Y resin microspheres [Sirtex Medical, Australia]) [1]. ^{99m}TcMAA is a radiotracer also commonly administered for lung perfusion scintigraphy in the assessment for perfusion defects in suspected pulmonary thromboembolism [2].

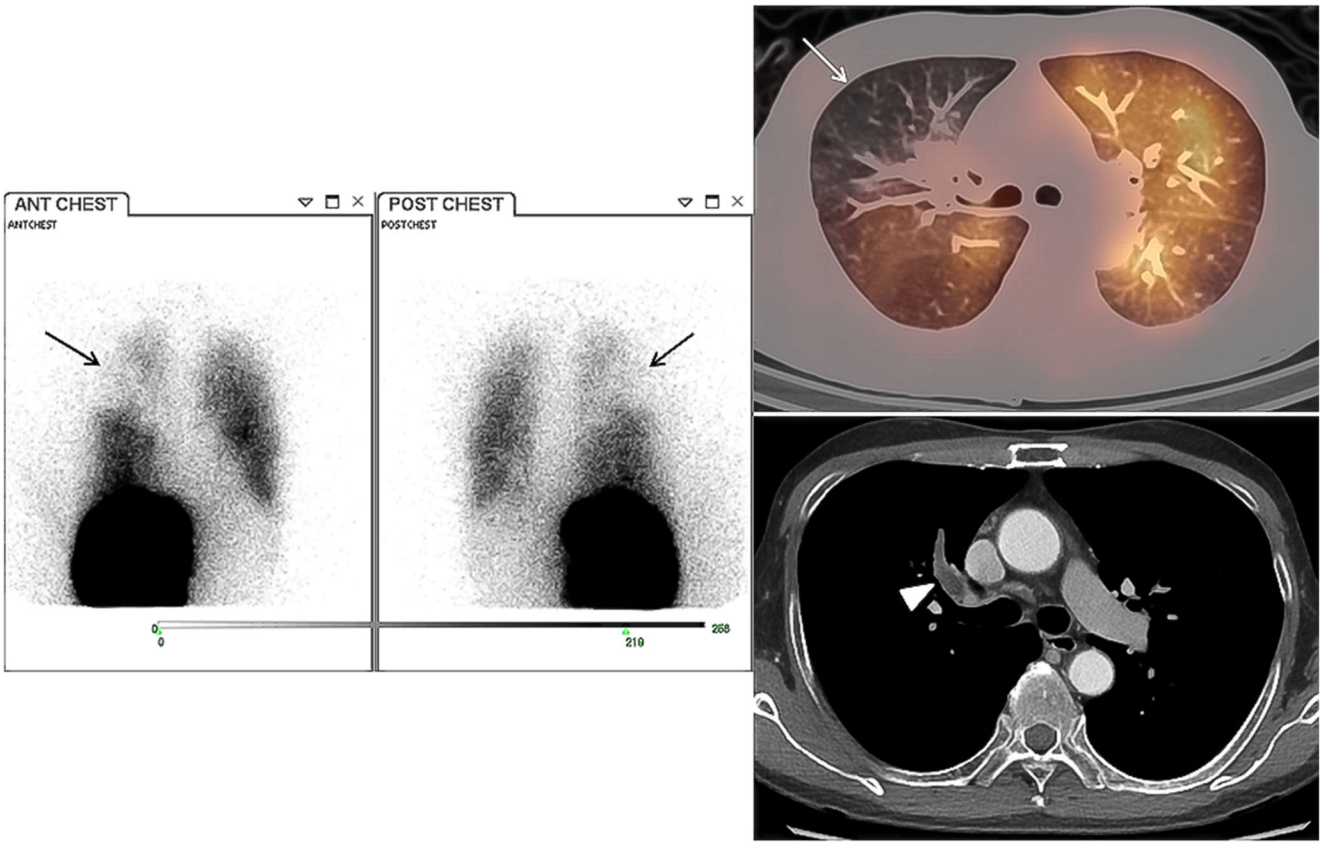
In this patient, even though the calculated liver-to-lung shunt was relatively low at approximately 9%, planar scintigraphy in the anterior and posterior views of both lungs were of sufficient quality to demonstrate a large perfusion defect (arrows) corresponding to the right upper lobe. An electrocardiogram showed tachycardia but the patient was otherwise asymptomatic. A contrast-enhanced CT was performed confirming a large filling defect (arrowhead) in the right main and right upper lobe pulmonary arteries, suspicious for thromboembolism. As a result of this finding, Y-90 SIRT was expediated for the patient to undergo anticoagulation therapy. Post anticoagulation, CT pulmonary angiography showed resolution of the embolus.

The nuclear medicine physician should possess a comprehensive understanding of radiotracer distribution especially in non-target organs as clinically significant incidental findings can potentially be missed by one with less experience.

This article is part of the Topical Collection on Image of the month

✉ Lenith Tai Jit Cheng
lenithcheng@gmail.com

[1] Department of Nuclear Medicine and Molecular Imaging, Singapore General Hospital, 11 Hospital Drive, Singapore 169610, Singapore



Compliance with ethical standards

Conflict of interest The author declares that there are no conflicts of interest.

Consent Informed consent was taken from the patient for publication.

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