

# Focal pulmonary uptake on myocardial perfusion scintigraphy due to iatrogenic microembolism

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## INTRODUCTION

Technetium 99m sestamibi (Tc 99m MIBI) is a commonly used radiotracer for myocardial perfusion imaging. Focal pulmonary uptake of Tc 99m MIBI on myocardial perfusion SPECT is an uncommon finding.

## CASE SUMMARY

A 66-year-old man, known case of CKD (chronic kidney disease) and a chronic smoker, presented with exertional dyspnoea and was referred for stress myocardial perfusion imaging. Bilateral focal lung uptake was noted on stress images. In view of CKD and history of

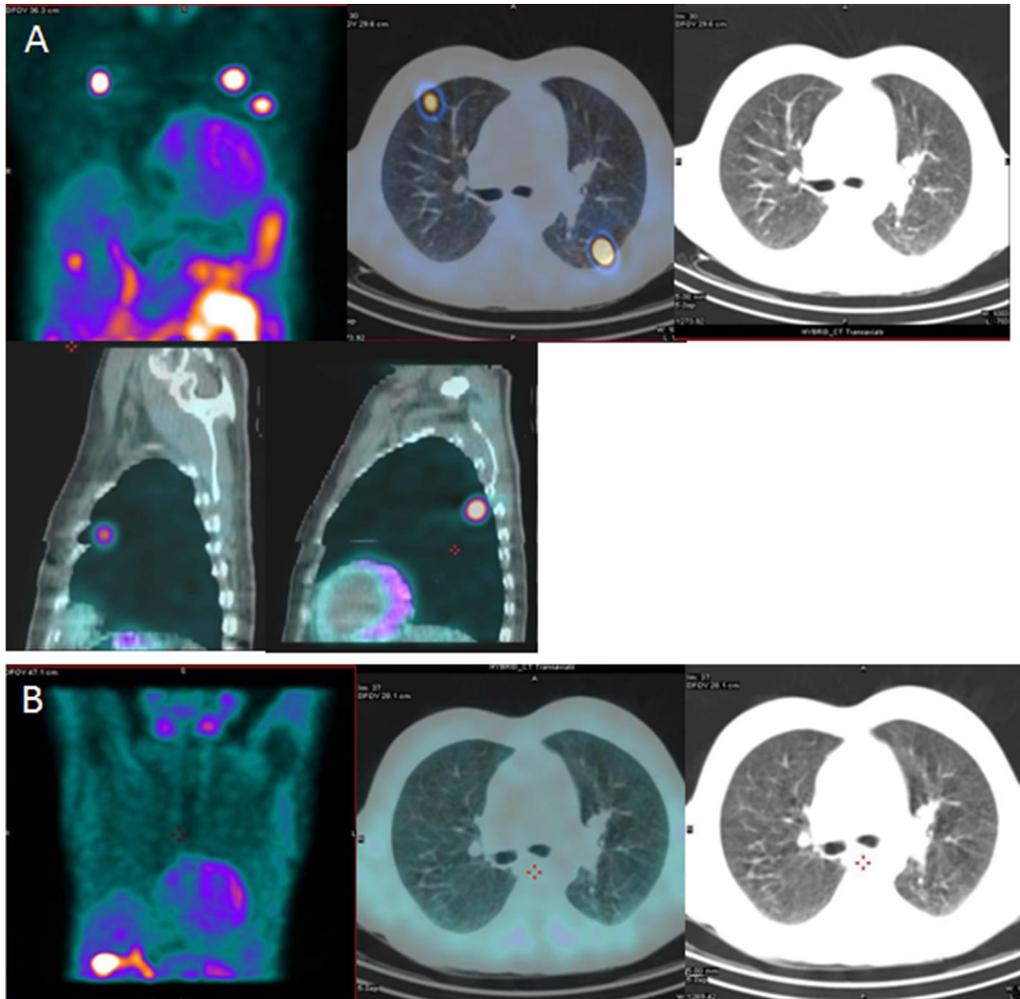
chronic smoking, brown tumors in bilateral ribs secondary to hyperparathyroidism and benign or malignant lung nodules were the possible differential diagnoses. SPECT/CT of chest was done to rule out the same and serum PTH levels were also obtained. SPECT/CT revealed bilateral focal lung uptake without any CT changes in lung parenchyma or ribs. Serum Intact PTH was 52.1 pg/mL (reference range 15.00-68.30). Rest images obtained on a separate day did not reveal any pulmonary uptake. Therefore, the focal pulmonary uptake seen on initial images could have been due to iatrogenic microembolism.

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**Figure 1.** A Tc 99m MIBI stress myocardial perfusion scan: MIP and fused SPECT/CT images showing bilateral focal pulmonary uptake with no corresponding abnormality on CT image. The finding is unlikely to be due to contamination as the radiotracer activity is seen within the lung and not on the body surface in the fused SPECT/CT images (axial and sagittal). B Rest images acquired on a separate day show no pulmonary uptake or CT changes.

## DISCUSSION

Focal pulmonary uptake on Tc 99m MIBI scintigraphy can be due to many causes like benign pulmonary nodules, primary or secondary lung tumors, tuberculosis, pneumonia, pathology of thoracic bony cage, and rarely due to iatrogenic microembolism.<sup>1,2</sup> Focal pulmonary uptake in absence of any parenchymal or bony pathology on CT is likely due to iatrogenic microembolism (Figure 1).

## Disclosure

The authors Anshul Sharma, Prateek Kaushik, Tejesh Pratap Singh and Chetan Patel have no conflict of interest to disclose.

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