

Breast ^{99m}Tc -MDP Uptake in a Man Mimicking Metastatic Lesion of the Ribs

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ABSTRACT

A 65 year-old overweight man with a history of prostate cancer was referred to our nuclear medicine department for bone scanning. Anterior projection images showed two small foci of increased radiotracer uptake corresponding to the anterior arcs of the right and left sixth ribs, which were interpreted as suspicious for metastatic involvement. Eight months later the patient was referred for follow-up bone scan. In the follow-up scan, those two foci of abnormal radiotracer activity were outside the limits of the bony structures of the chest. In fact, those foci changed their position and were due to radiotracer uptake by the enlarged breasts of this gentleman (Gynecomastia). Previously, it has been just one report concerning radiotracer uptake in the breasts of a man. Based on our case report, this abnormal finding is not exclusively observed in women and it can be also seen in men who suffer from gynecomastia. Physical examination in these settings can be extremely helpful. Oblique, lateral and SPECT (Single Photon Emission Tomography) views can also confirm the extraskeletal origin of radiotracer uptake.

Key words: Bone scintigraphy, ^{99m}Tc -MDP, Prostate cancer, Breast uptake.

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CASE REPORT

A 65 year-old overweight man with a history of prostate cancer was referred to our nuclear medicine department for bone scanning. Anterior projection images showed two small foci of increased radiotracer uptake corresponding to the anterior arcs of the right and left sixth ribs, which were interpreted as suspicious for metastatic involvement (Figure 1).



Figure 1. Anterior whole body images showed two foci of abnormally increased radiotracer uptake in the antero-lateral aspect of the chest wall (arrows).

Eight months later the patient was referred for follow-up bone scan. In the follow-up scan, those two foci of abnormal radiotracer activity were clearly outside the limits of the bony structures of the chest (Figure 2).

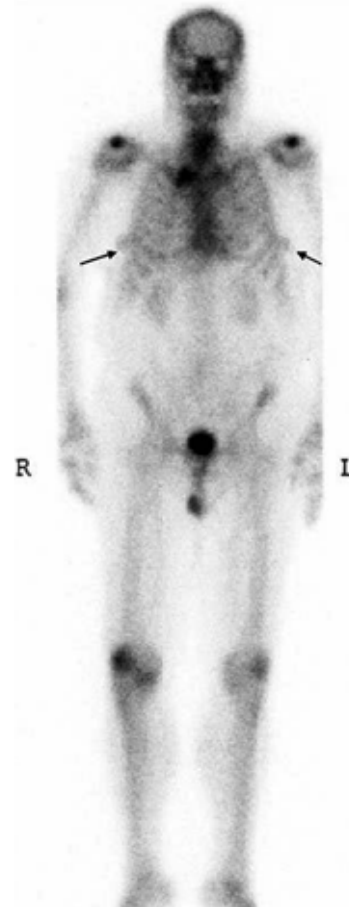


Figure 2. Follow-up bone scan revealed that the previously misinterpreted foci of abnormal activity are in fact, extraskeletal.

In follow-up bone scan those foci of abnormal activity changed their position confirming that they are in fact extraskeletal. Regarding the clinical examination and presence of remarkable gynecomastia and by comparing to the previous scan, it was concluded that abnormal foci of uptake were

due to radiotracer uptake by his enlarged breasts (Gynecomastia).

DISCUSSION

Although ^{99m}Tc-MDP uptake in the breasts of female patients is a well-known fact (1-3), as to our knowledge, it is just one report concerning radiotracer uptake in the breasts of a man (4). The mechanism of ^{99m}Tc-MDP uptake by breast tissue is unknown (4). However, careful attention should be applied to prevent misinterpretation of abnormal breast activities as bony lesions, as nuclear medicine procedures usually suffer from lack of high specificity and numerous cases of false positive scan findings have been reported in bone scintigraphy (5-6). Based on our case report, this abnormal finding is not exclusively observed in women and it can also be seen in male gender who suffers from gynecomastia. Physical examination in these settings can be extremely helpful. Oblique, lateral and SPECT (Single Photon Emission Tomography) views can also confirm the extraskkeletal nature of the radiotracer uptake. Based on previous researches, SPECT image may disclose abnormal areas in the skeleton not seen with planar views (7, 8).

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