

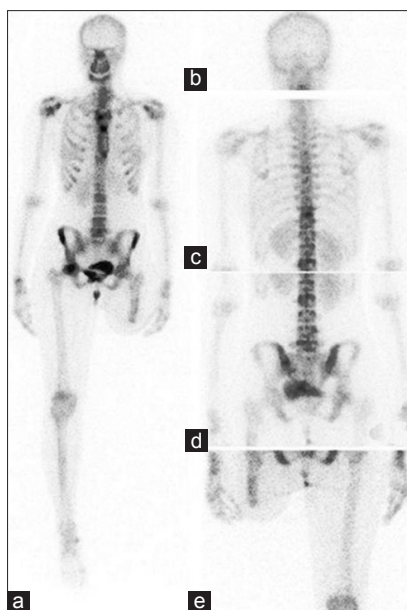
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## Synovial sarcoma with isolated bone metastases, demonstrated by $^{99m}\text{Tc}$ -MDP bone scintigraphy and $^{18}\text{F}$ -FDG PET/CT

Sir,

We describe a 25-year-old female patient, a known case of synovial sarcoma of lower end of left femur, who had

undergone above knee amputation 5 years ago presented with low backache of 1-month duration. She was subjected to  $^{99m}\text{Tc}$  -MDP bone scintigraphy to look for bone metastases.



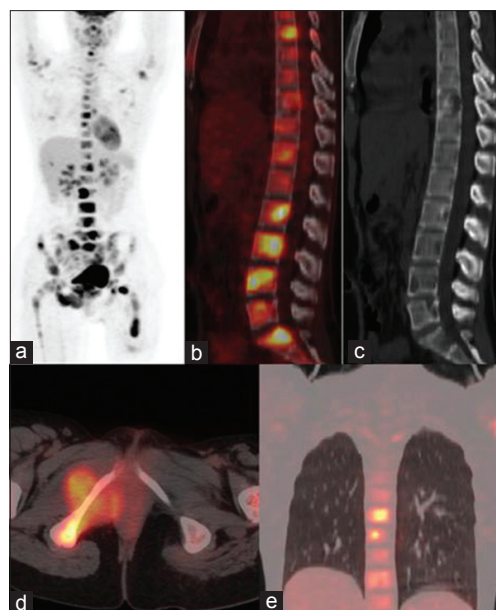
**Figure 1:**  $^{99m}\text{Tc}$ -MDP bone scintigraphy whole body in anterior projection (a) and spot images in posterior view (b-e), showing increased tracer uptake in multiple thoraco-lumbar vertebrae, right pubic bone, and right femoral head suggestive of widespread skeletal metastases

Whole-body bone scan in anterior projection [Figure 1a] and spot images in posterior view [Figures 1b-e] showed increased tracer uptake in multiple thoraco-lumbar vertebrae, right pubic bone, and right femoral head suggestive of widespread skeletal metastases.  $^{18}\text{F}$ -FDG PET/CT showed intense FDG uptake in the lytic lesions in multiple vertebrae, bilateral ribs, pelvis, and femora with soft tissue components along the pubic bones [Figures 2a-d]. CT scan showed multiple lytic lesions in the lower thoracic and lumbar vertebrae, right pubic bone, and right femoral head, consistent with metastases. However no FDG uptake or any nodules was seen in the lung parenchyma on either side [Figure 2e].

Synovial sarcoma is the fourth most common type of soft-tissue sarcoma, accounting for 2.5-10.5% of all primary soft-tissue malignancies worldwide.<sup>[1-5]</sup> Metastatic disease occurs approximately in 50% of patients.<sup>[6]</sup> The most frequent metastatic site is the lung, affected in almost 94% of cases, followed by lymph nodes (4-18%). Even though bone metastases occur in 8-11% of patients, most of these patients also have lung metastases.<sup>[7-9]</sup> Isolated bone metastasis in the absence of lung involvement in synovial sarcoma is rare. Bone scintigraphy is a useful modality in the assessment of bone metastases in patients with synovial sarcoma.  $^{18}\text{F}$ -FDG PET/CT may be recommended as one stop shop investigation in the evaluation of these patients to detect bony as well as other organ involvement.

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**Figure 2:**  $^{18}\text{F}$ -FDG PET/CT showing intense FDG uptake in the lytic lesions in multiple vertebrae, bilateral ribs, pelvis, and femora with soft tissue components along the pubic bones (a-d). No FDG uptake or any nodules is seen in the lung parenchyma on either side (e)

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