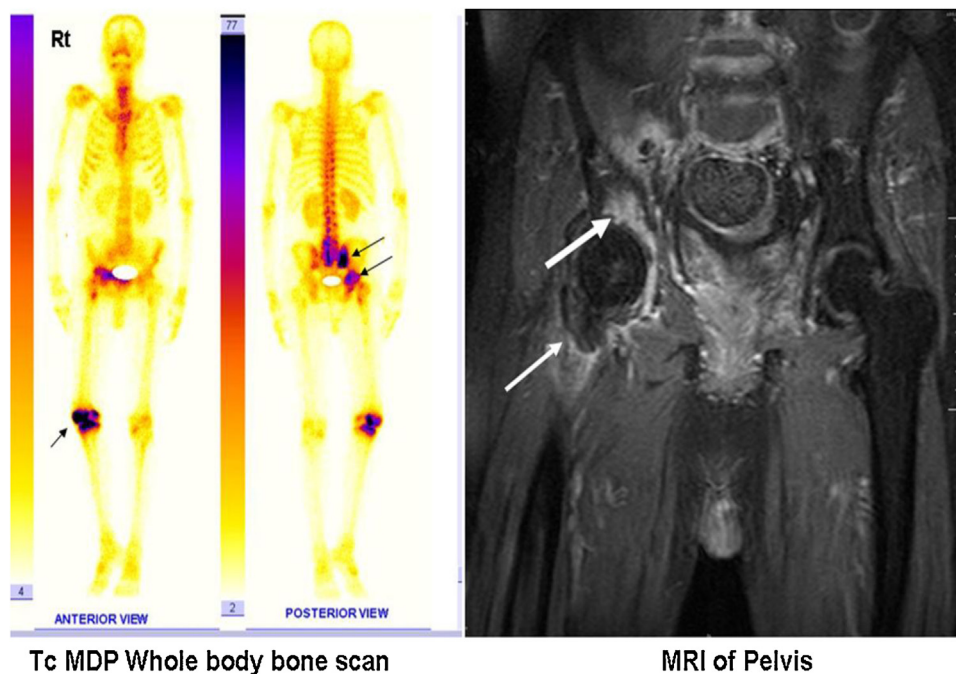
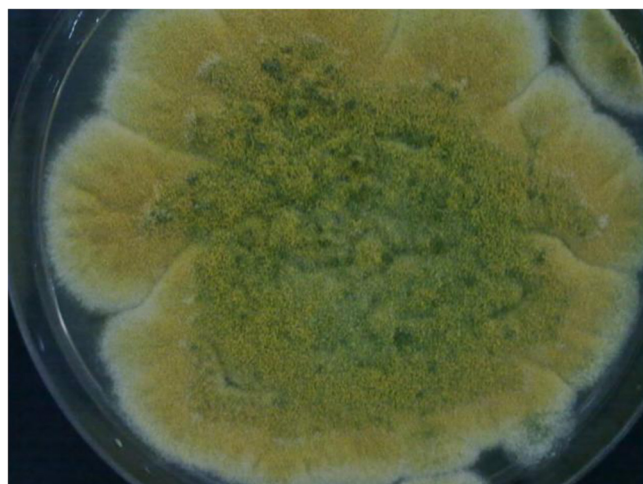


## Medical Imagery

## MDP bone scan in the early identification of polyarticular aspergillosis



**Figure 1.** (A) 20 millicurie of Tc-MDP was injected intravenously and 3 h later whole body anterior and posterior images were acquired on a dual-head variable-angle gamma camera. Images show hot spots in the right sacroiliac, hip, and right knee joints (arrows). (B) Magnetic resonance image of the pelvis (T2-STIR: 'short TI inversion recovery' is an inversion recovery pulse sequence with specific timing so as to suppress the signal from fat, for better soft tissue visualization) was later done, and showed a hyper-intense signal in the right sacroiliac joint and hip joint with post-contrast enhancement.



**Figure 2.** Sabouraud dextrose agar plate showing yellow-green colored colonies of *Aspergillus flavus* from the patient's arthroscopic lavage fluid.

*Aspergillus sp* are opportunistic pathogens. *Aspergillus fumigatus* accounts for the majority of disease, followed by *Aspergillus flavus*. The lungs and skin are most commonly involved. Exclusive musculoskeletal involvement is very rare, more so with *A. flavus*, which is primarily a plant/avian pathogen.

A 63-year-old diabetic male with progressive lower backache was considered for  $^{99m}\text{Tc}$ -MDP (methylene diphosphate) whole body skeletal scintigraphy, as his hematological tests and a magnetic resonance image (MRI) of the spine were non-contributory. Hot spots were seen in the L4, L5, and S1 vertebrae and the right sacroiliac, hip, and right knee joints (Figure 1). Right hip aspiration and effusion Gram staining showed only inflammatory cells. A culture of post-arthrotomy drainage fluid from the right hip and knee joints grew filamentous fungus *A. flavus* (Figure 2). A computed tomography (CT) scan of the chest ruled out associated pulmonary aspergillosis. Thus the bone scan proved invaluable in revealing the polyarticular involvement, as well as identifying the sites of active disease. The patient was treated successfully with voriconazole.

Skeletal aspergillosis, though rare, is invariably associated with immunocompromised states, as in our patient who had diabetes mellitus. It can involve any age group and has a predilection for the vertebrae and ribs.<sup>1</sup> On literature survey, only six reports of uniarticular involvement are available,<sup>2</sup> while our case highlights polyarticular aspergillosis as a sole presentation.

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I. Firuz<sup>a,\*</sup>

S. Padma<sup>a</sup>

P. Shanmuga Sundaram<sup>a</sup>

V. Anil Kumar<sup>b</sup>

<sup>a</sup>Department of Nuclear Medicine and PET CT,  
Amrita Institute of Medical Sciences, Cochin 6802041,

Kerala, India

<sup>b</sup>Department of Microbiology, Amrita Institute of Medical Sciences,  
Ponekara, Kochi, Kerala, India

\*Corresponding author. Tel.: +91 484 2852001;

fax: +91 484 2852003

E-mail address: firuz@aims.amrita.edu

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