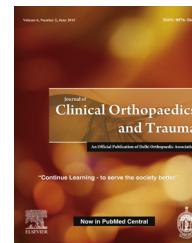


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## Case Report

# Clinico-radiological improvement in an immunocompetent patient presented with scedosporium apiospermum osteomyelitis

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## ABSTRACT

Scedosporium apiospermum is frequently found as a saprophyte in soil, sewage and contaminated water. Its manifestations in immunocompetent patients are usually localised and in immunodeficient patients, it causes invasive systemic diseases. We are reporting the case of a 40-year-old male, who presented with pain, oedema and multiple discharging sinuses over the lateral aspect of the left foot with history of thorn prick. On examination, there were multiple active sinuses with tenderness and local rise in temperature. Calcaneum on palpation showed a thickened and irregular surface with limitation of ankle and subtalar movements. Blood investigations showed a moderate rise in ESR and CRP. X-rays showed typical features of chronic osteomyelitis with sclerosis, cavities and irregular bone contour. CT report showed features of osteomyelitis involving calcaneum, talus, cuneiforms and navicular bone with periarticular soft tissue involvement and mild focal collection in the calcaneum. On repeated culture, it was found to be scedosporium apiospermum fungus. We managed the case with voriconazole therapy and it responded with excellent clinical and radiological improvement by 9 months.

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## 1. Introduction

Scedosporium apiospermum is frequently found as a saprophyte in soil, sewage, manure and contaminated water.<sup>1</sup> Its manifestations in immunocompetent patients are usually localised. Local manifestations usually follow minor trauma with splinters or thorns and cause invasive systemic diseases in immunodeficient patients.<sup>1</sup> We are reporting a case of scedosporium apiospermum osteomyelitis of the calcaneum.

## 2. Case report

A 40-year-old male presented with multiple discharging sinuses over the lateral aspect of the left hind foot. He was a manual labourer without any past history suggestive of immunodeficiency. He had a history of thorn prick over the plantar aspect of left foot 6 months back. Following this, he developed pain and oedema of the left foot. It was a pricking type of pain, gradually increasing in character without

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**Fig. 1 – Image of left foot showing diffuse oedema with two discharging sinuses over the lateral aspect of the left calcaneum.**

radiation of pain. Oedema was pitting in type, which gradually aggravated. Three months back, a sinus appeared over the lateral aspect of the left hind foot with serous discharge. Discharge aggravated gradually with a yellowish fluid.

On examination, mild local rise in temperature and tenderness were present. There was a diffuse oedema of the left foot with two discharging sinuses over the lateral aspect of the calcaneum [Fig. 1]. One was 3 × 2 cm and the other 1 × 1 cm size with induration of the surrounding skin. Margins were indurated with a reddish brown discoloration. Sinus base was not fixed to the bone. On applying pressure, there was increased discharge with associated tenderness. Calcaneum was found to be irregular and thickened on palpation. Range of ankle movement was 15° dorsiflexion and 20° plantar flexion actively and 20° dorsiflexion and 25° plantar flexion passively. Subtalar movements were severely limited both actively and passively. Midfoot movements were normal. He had inguinal lymphadenopathy but no limb length discrepancy or distal neurovascular deficit. So we suspected bacterial osteomyelitis and managed accordingly.



**Fig. 2 – X-ray (lateral view of ankle) showing typical features of chronic osteomyelitis of calcaneum with sclerosis, cavities and irregular bone contours.**

Blood investigations showed haemoglobin to be 12.1, total count 12,000 and a differential count of 60% polymorphs and 25% lymphocytes. ESR was 42 mm per hour and CRP was 12. Liver and renal function tests were normal. RBS normal, HIV and other screening tests were negative. Investigations showed normal immune status.

On radiological evaluation, X-ray (Fig. 2) showed typical features of chronic osteomyelitis with sclerosis, cavities and irregular bone contours. The CT images (Fig. 3a and b) showed features of osteomyelitis like osteopenia, lytic areas and cortical irregularities involving calcaneum, talus, cuneiforms and navicular bone with enlarged peri-articular soft tissue shadow and lytic hypodense areas in calcaneum.

Culture from the sinus track showed mixed growth and we embarked on the antibiotics. We planned curettage and biopsy, whose culture reported as *scedosporium apiospermum* osteomyelitis. Through the microscope (Fig. 4a and b) it is commonly seen as cylindrical conidiogenous cells arising from branching septate hyphae (2–4 μm in diameter) producing slimy masses of conidia<sup>1</sup> [unicellular, smooth, and oval, which may be found in clusters-graphium state].

We treated him by intravenous injection of voriconazole 6 mg/kg (360 mg) 12th hourly for a day followed by 4 mg/kg (240 mg) 12th hourly for 20 days.<sup>2</sup> After starting voriconazole pain, oedema and discharge decreased in two weeks and sinus started healing. After the initial intravenous management, voriconazole was maintained as oral dose 200 mg 12th hourly for 2 months. By 3rd month [Fig. 5a and b] sinuses healed, and cavities in the calcaneum as well as sclerosis started improving radiologically. By 9th month [Fig. 6a and b] we found excellent outcome with nearly normal soft tissue and completely healed sinus, while radiologically, cavities were obliterated with regular bone contours and normal bone density of calcaneum. The patient started his work by 10th month.

### 3. Discussion

*Scedosporium* infections are usually opportunistic, ranging from colonisation in cystic fibrosis patients to neurological affections in drowning cases and disseminated diseases in

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