

# Fungal Infection of Native Hip Joint Presenting as Secondary Arthritis in 52-Year-Old Male – A Rare Case Report

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## Learning Point of the Article:

Although rare, fungal infection in a native joint is a possibility.

## Abstract

**Introduction:** Fungal infections of native joints are exceedingly rare and often present with non-specific symptoms, making diagnosis challenging. Hip involvement is particularly uncommon and may mimic tuberculosis or bacterial septic arthritis. Patients on long-term hemodialysis are at increased risk due to their immunocompromised state and repeated vascular access.

**Case Report:** We present the case of a 52-year-old male with chronic kidney disease on maintenance hemodialysis for 5 years, who developed progressive left hip pain and functional limitation over 18 months. Radiological evaluation revealed destructive arthritis. He underwent a two-stage procedure: Initial debridement with insertion of an antibiotic cement spacer, during which intra-operative cultures yielded *Candida guilliermondii*. The patient received six weeks of intravenous Caspofungin. After normalisation of inflammatory markers, a second-stage total hip replacement was performed. Post-operatively, the patient achieved independent ambulation with significant pain relief and improved hip function.

**Conclusion:** *Candida guilliermondii* infection of the native hip in dialysis-dependent patients is exceptionally rare. Early diagnosis with culture confirmation, followed by antifungal therapy and staged surgical management, is critical for optimal functional recovery.

**Keywords:** Fungal arthritis, native hip infection, *Candida guilliermondii*, hemodialysis, total hip replacement.

## Introduction

Fungal arthritis of native joints is an uncommon clinical entity, representing <1% of all septic arthritis cases [1]. Hip joint involvement is particularly rare and frequently misdiagnosed as bacterial septic arthritis or tuberculosis, especially in endemic regions [2,3,4,5,6]. Patients with chronic kidney disease (CKD) on long-term hemodialysis are predisposed to opportunistic infections due to immunosuppression, vascular access, and repeated interventions [3,4,7]. Prompt recognition and targeted management are essential to prevent progressive joint

destruction and disability.

## Case Report

A 52-year-old male with CKD on maintenance hemodialysis for 5 years presented with gradually worsening left hip pain and reduced mobility over 18 months. Clinical examination revealed painful restriction of motion.

Radiograph (Fig. 1) and magnetic resonance imaging showed advanced destructive arthritis of the hip. A two-stage surgical

## Author's Photo Gallery



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**Figure 1:** Pre-operative Radiograph demonstrating advanced destructive arthritis of left hip.

procedure was planned. In stage one (Fig.2), thorough debridement was performed, and an antibiotic-impregnated cement spacer was placed (Fig.3). Intra-operative tissue cultures grew *Candida guilliermondii*. The patient was treated with intravenous Caspofungin for six weeks, after which inflammatory markers normalised.

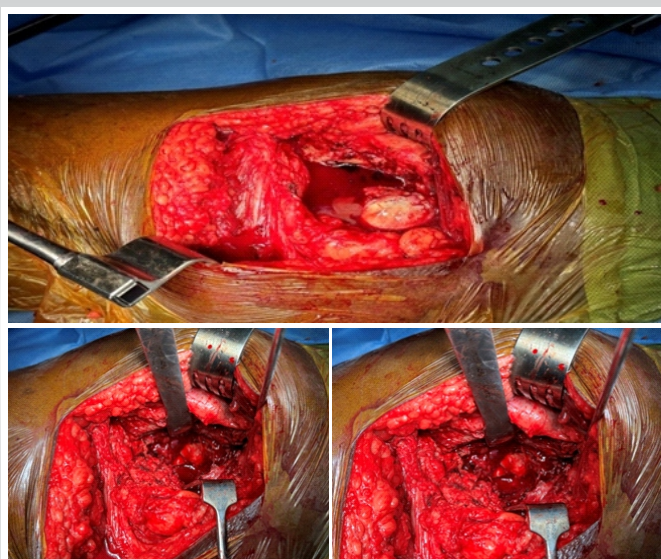
Stage two involved total hip replacement (Fig.4). The post-operative course was uneventful. At 12 months follow-up, the patient reported marked pain relief, improved range of motion, and independent ambulation.

### Discussion

Fungal arthritis accounts for a very small fraction of native joint infections [1, 2]. *Candida* species are more commonly implicated in prosthetic joint infections than native joints [6, 8].



**Figure 3:** Post-operative radiograph following stage-1 surgery demonstrating antibiotic cement spacer.



**Figure 2:** Intra-operative pictures showing significant synovitis and effusion.

*Candida guilliermondii* is a rare pathogen but has been reported in immunocompromised hosts, especially in those with CKD and on dialysis [7, 9].

Diagnosis requires a high index of suspicion, as symptoms are often non-specific and may mimic bacterial or tubercular arthritis [2, 10]. Imaging findings are inconclusive; culture of joint fluid or intraoperative tissue remains the gold standard [11].

Treatment typically involves a combination of surgical debridement and systemic antifungal therapy [8, 12]. Staged surgical management, as in this case, ensures eradication of infection while enabling subsequent joint reconstruction. Two-stage revision arthroplasty has been reported with favourable



**Figure 4:** Post-operative radiograph following stage 2 surgery showing well aligned THR.



outcomes in Candida prosthetic joint infections [6, 12].

### Conclusion

Native hip joint infection due to *Candida guilliermondii* is exceptionally rare, particularly in dialysis-dependent patients. This case highlights the importance of early suspicion, culture-based diagnosis, prolonged antifungal therapy, and staged surgical management for achieving favourable outcomes.

**Declaration of patient consent:** The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given the consent for his/ her images and other clinical information to be reported in the journal. The patient understands that his/ her names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

**Conflict of interest:** Nil **Source of support:** None

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### Clinical Message

- 1) To have a high index of suspicion of subacute/chronic infection (Fungal / Koch's) with atypical clinical and radiological presentation in immunocompromised patient.
- 2) The importance of tissue culture to rule out fungal / tubercular / bacterial infection, especially in immunocompromised patient.

**Conflict of Interest:** Nil  
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**Consent:** The authors confirm that informed consent was obtained from the patient for publication of this article

### How to Cite this Article

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