Primary Cutaneous *Candida tropicalis* Infection in a Patient With B-Cell Lymphoma

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### Case Report

A 61-year-old man with diffuse large B-cell lymphoma who had undergone myeloablative chemotherapy presented with a chronic tender plaque on the left side of the flank. It started as localized superficial erythema 5 weeks prior and 3 days after the resolution of treatment-associated neutropenia. Clinical examination revealed a well-demarcated, 6×8-cm, reddish brown, indurated plaque (Figure 1). The patient reported no history of trauma to the area other than subcutaneous heparin injections (3 times daily), and repeat bone marrow biopsy showed no evidence of lymphoma. The patient was afebrile with negative blood cultures, and abdominal computed tomography revealed only soft tissue edema. Eight days of treatment with vancomycin had provided no notable response. The dermatology consultation team performed a diagnostic biopsy and tissue culture. The skin biopsy showed mixed lobular and septal panniculitis with adipocyte necrosis and a mixed inflammatory infiltrate; Gomori methenamine-silver staining highlighted budding yeast and pseudohyphal forms (Figure 2). A tissue culture grew *Candida tropicalis*. Treatment with oral fluconazole was started.

The lesion progressed and the patient developed worsening flank pain with purulent discharge from the biopsy site. Localized incision and drainage was performed. Wound cultures grew *C tropicalis*, while blood cultures remained negative; a fundoscopic examination was unremarkable. The patient was...
switched to intravenous fluconazole. Repeat abdominal imaging revealed subcutaneous nodularity and inflammatory stranding with a 1.4×6.2-cm enhancing fluid collection. The patient underwent extensive debridement of necrotic skin and placement of a vacuum-assisted closure dressing. Fluconazole was continued and the lesion progressively improved. The patient recovered remarkably and restarted chemotherapy but died from tumor lysis syndrome. Autopsy revealed a healing wound with isolated areas of yeast and pseudohyphal forms. There was no evidence of disseminated Candida infection.

Comment

Primary Candida infections of the deep skin and soft tissue are extremely rare. Furthermore, the majority of Candida infections with cutaneous findings are caused by Candida albicans. The reported cases are primarily heterogenous in presentation and nearly every patient was immunosuppressed. Wolfson et al reported a case of primary deep skin infection with C tropicalis as the sole pathogen.

The uncommon nature of primary Candida skin infection led to a delay in diagnosis in our patient. The infection followed an indolent course, with skin erythema evolving into an abscess over 5 weeks without constitutional symptoms. The patient’s death was unrelated to the infection, and the lesion was remarkably improved at autopsy.

Cutaneous candidiasis may result from inoculation injury, direct contact with infected tissue, or...
hematogenous spread. Although our patient may have experienced transient candidemia and seeding, the patient’s negative blood cultures and lack of systemic symptoms suggest that it was unlikely. Additionally, no nearby tissue was affected, ruling out direct extension. Inoculation injury is a plausible explanation given his daily abdominal heparin shots.

*Candida* panniculitis is diagnosed using tissue biopsy and culture. Biopsy reveals *Candida* yeast forms with possible necrosis and inflammation. Of the reported cases, the majority of patients have been treated with antifungals with or without surgery, and the prognosis has been favorable. 2, 6, 8

**Conclusion**

Although rare, primary cutaneous candidiasis should be considered in immunocompromised patients presenting with cellulitis or a lesion that is unresponsive to therapy.

**REFERENCES**