Candida Parapsilosis Osteomyelitis

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Statement of Purpose

Candida parapsilosis is an often overlooked, increasingly prevalent cause of infection in immunocompromised patients. This opportunistic yeast must be included in the differential diagnosis for any poor healing ulceration, especially in the diabetic and vascular compromised patient.

Case Report

We report on a case of an 82 year-old male diabetic with peripheral arterial disease and end stage renal disease, seen for a non-healing ulcer secondary to an ingrown left hallux nail.

Past medical history significant for diabetes mellitus with peripheral neuropathy, PAD, ESRD, CAD, AFib, HTN, hyperlipidemia, and obesity.

On physical examination, pedal pulses were non-palpable, but audible upon Doppler examination bilaterally. Capillary refill time was delayed to all digits. Loss of protective sensation was noted to ankle level, with absence of vibratory sensation noted distal to medial malleolus bilaterally.

Dermatologic examination revealed ulcerations to the distal hallux bilaterally and left 3rd toe. Increased erythema, edema, ulcer and tenderness to palpation were noted. (Figure 1.)

The remainder of the neurovascular and musculoskeletal examination was unremarkable.

Radiographic evaluation revealed a small area of cortical disruption noted to the distal phalanges with evidence of osteolysis.

Plan:

Pulse volume recordings revealed small vessel disease. The fianch-index was noted to be 0.46 on the right, 0.21 on the left. (Figure 3.)

Results

Culture Results:

Fungal culture was positive for C. Parapsilosis. Other culture results were unremarkable. (Figure 4.)

Lab Results:

- No leukocytosis noted

Culture isolate:

Candida Albicans

Fungal culture was positive for C. Parapsilosis. Other culture results were unremarkable.

Follow Up

Due to the patient’s poor vascular status, the patient was scheduled for angiography in an attempt to improve perfusion to the left foot. Unfortunately, just prior to vascular intervention the patient fell, fracturing his pelvis.

Revascularization was subsequently postponed and unfortunately the patient passed away due to cardiac complications shortly after the fracture occurred.

Discussion

Physicians must be aware of this uncommon source of osteomyelitis in diabetic foot ulcers, especially in patients who do not respond to antibacterial therapy. Standard of care must include a bone biopsy, surgical debridement, and antifungal therapy.

Correct diagnosis requires a serious consideration of the potential risk factors and a high degree of suspicion of infection. The diagnosis of which requires the use of appropriate mycologic tests. The possibility of yeast osteomyelitis should be considered any time a contiguous wound and long-term antibiotic use co-occur coincidently.

The fungicidal pharmacology of fluconazole will kill the infecting organism rather than prevent reproduction. Fluconazole has been shown to be selectively lethal to fungal cells by inhibiting demethylation of C-14 sterols, resulting in the accumulation of abnormal methyl sterols.

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References


