

## Fatal skin rashes and myalgia in a leukaemic patient

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A 48-year-old man with acute myeloid leukaemia developed neutropenic fever five days after induction chemotherapy, and was treated with intravenous imipenem. The fever quickly subsided but the patient developed generalised erythematous maculopapular itchy skin rashes. Drug allergy was suspected and the imipenem was substituted with intravenous cefepime. Microbiological investigations were negative. In spite of an apparent initial response, the fever recurred ten days later, and the patient had severe myalgia. The skin rashes also became more pronounced (Figure 1A). Subsequent microbiological cultures showed *Candida tropicalis* from blood samples taken via a central venous catheter and a peripheral vein. The central venous catheter was removed and high dose intravenous fluconazole (400mg/day) and liposomal amphotericin B (5mg/kg/day) were started. Granulocyte-colony stimulating factor (G-CSF, 300 µg/day) was also given to hasten neutrophil recovery. A skin biopsy was performed, and confirmed the presence of disseminated candidiasis, with abundant periodic acid Schiff-positive fungal spores and pseudohyphae in the upper dermis (Figure 1B). The clinical course was further complicated by rhabdomyolysis, as evidenced by persistent myalgia and grossly elevated creatinine kinase (CK, 10,000 µmol/L). Despite treatment with large volumes of intravenous fluid and forced alkaline diuresis, the CK continued to increase (to > 60,000 µmol/L), with concomitant decrease in urine output and deterioration in renal function. The patient finally died of uncontrolled sepsis.

Disseminated candidiasis occurs mainly in severely immunocompromised patients. The commonest species involved is *Candida albicans*. However, in Asian countries, particularly in patients with haematological malignancies or after bone marrow transplantation, *Candida tropicalis* fungaemia is more prevalent, with a mortality reaching 60%. Our patient showed two common manifestations of candidaemia, which might easily be overlooked by the inexperienced clinician. Firstly, skin rashes in the form of tender erythematous papular lesions, sometimes difficult to distinguish from other rashes, are characteristically associated with disseminated candidiasis. Secondly, myalgia, sometimes associated with significant rhabdomyolysis, is another important manifestation of candidaemia, particularly when the responsible organism is *Candida krusei*.



Figure 1A.

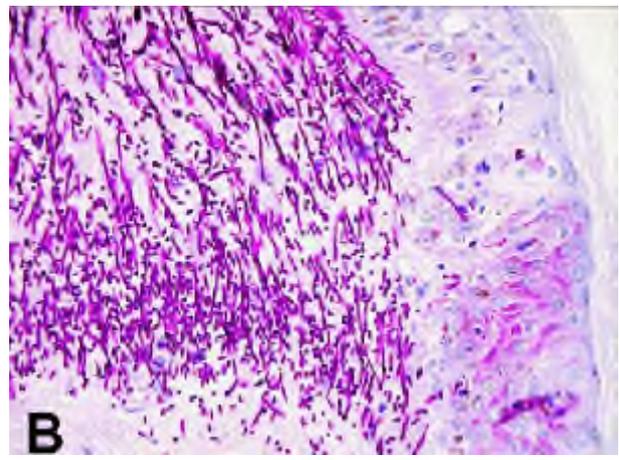


Figure 1B.

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