



Cutaneous mucormycosis

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Abstract

Mucormycosis, or Zygomycosis, is a rare fungal infection caused predominantly by members of the family Mucoraceae of the order Mucorales. Fungus commonly isolated clinically belongs to the genera *Absidia*, *Mucor* or *Rhizopus*. They can cause devastating illness in previously well patients when compared to other filamentous fungi. We present a case of mucormycosis in a person with no predisposing factors.

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Case report

A 57-year-old male presented with painful, purulent swelling on the posterior medial aspect of the right ankle joint. There was no history of trauma, fever or systemic symptoms. The patient had no history of diabetes or immunosuppression. A routine set of bloods including full blood count, renal function tests and CRP were not significant. Blood cultures failed to grow any organism. An X ray of the right ankle showed a mass posterior to calcaneum. Subsequent MRI report mentioned that the lesion showed haemorrhagic and cystic areas with increased vascularity and surrounding soft tissue edema. The features were suggestive of a possible malignant soft tissue mass lesion. The lesion was biopsied and the findings were in keeping with a diagnosis of cutaneous invasive mucormycosis.





Discussion

Rhinocerebral/rhinofacial form is the most common but occasionally pulmonary, gastrointestinal and cutaneous forms may also occur. Mucormycosis of the cutaneous and subcutaneous tissues is relatively uncommon. Mortality varies depending on site of infection and patient co-morbidity. Single site infection in patients with no underlying pathology has an overall mortality of 35% but disseminated disease has a mortality of 96%. The most common predisposing factors include Diabetes, immunosuppression and history of trauma. Patients with chronic renal failure are also susceptible. Mucormycosis can be diagnosed in histopathologic sections by hematoxylin and eosin stain (H&E)

with the aid of PAS or GMS stain. Microscopically, the fungus is characterized by broad, non-septate hyphae that are either cylindrical, irregular or distorted in shape. The hyphal branching is irregular and the walls of the hyphae vary in thickness. The fungal infection is almost always accompanied by either a granulomatous infiltrate composed of epithelioid and multinucleate giant cells or a polymorphonuclear leukocyte infiltrate forming microabscesses. Routine blood work may not suggest anything and the cultures may not grow any organisms often. Treatment includes, complete excision or debridement of the lesion with systemic Amphotericin-B. If left untreated or in case of inadequate removal of lesion, it may destroy the surrounding local areas or extend into deep tissues that may require amputation.

Summary

To summarize, cutaneous and subcutaneous forms of mucormycosis are rare. This case report illustrates the ability of the fungus to cause a debilitating injury in a healthy adult without any predisposing factors as can be seen from the images.