Cutaneous mucormycosis with necrotising fasciitis in a young immunocompetent individual

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SUMMARY Primary cutaneous mucormycosis is uncommon and is extremely rare in immunocompetent young individuals. Here we report a case of necrotising fasciitis due to mucormycosis in an immunocompetent young individual following minor trauma. Mucormycosis must be suspected in any wound that is worsening despite appropriate treatment even in immunocompetent individuals.

Discussion

Although mucormycosis is an opportunistic infection, an increasing trend of mucormycosis in immunocompetent patients has been seen and reported recently. Cutaneous infections can occur in patients with disrupted cutaneous barriers – for example, as a result of a motor vehicle accident as in our patient. In patients with open wounds, mucormycosis has a cottony ‘bread mould’ appearance. Secondary

Figure 1 Photomicrograph showing fibrocollageneous tissue with numerous spores and branching hyphae (PAS × 100)
vascular invasion may cause tissue necrosis and lead to phycomycotic gangrenous cellulitis and necrotising fasciitis. A diagnosis of mucormycosis requires histopathologic evidence of fungal invasion of the tissues. Culturing organisms from an infected site is rarely sufficient to establish the diagnosis because the causative agent is ubiquitous. Histologically, Mucorales exhibit broad, thin-walled, hyaline, often aseptate or pauciseptate hyphae (Figure 1) with frequent angioinvasion. Mucormycosis is often rapidly progressive. Surgical debridement of infected and necrotic tissue should be performed in addition to antifungal therapy on an urgent basis. Mucoralle are usually sensitive to amphotericin B and posaconazole and are resistant to ketoconazole, itraconazole and voriconazole.

Conclusion

Mucormycosis must be suspected in any wound that is worsening, despite appropriate treatment, even in immunocompetent individuals. Aggressive and repeated debridement and antifungal therapy are essential for recovery from this condition.

References