

Cutaneous Alternariosis due to *Alternaria chlamydospora* After Bone Marrow Transplantation

Sir,

Infection with *Alternaria chlamydospora* has not been previously reported in patients who have received bone marrow transplantation (BMT). We describe here a patient who developed specific cutaneous lesions due to *A. chlamydospora* 100 days after BMT.

CASE REPORT

In June 1994, a 33-year-old man was diagnosed with chronic myelogenous leukaemia. In November 1995, he underwent an allogeneic BMT from an unrelated donor. Three months later, a slightly itchy erythematous papule appeared on his left leg. During the following days, 2 similar lesions developed on his left thigh and right arm (Fig. 1). The lesions increased a little in size and the centre of the lesions became necrotic and ulcerated. A biopsy specimen was obtained from the left leg and showed epidermal hyperplasia with discrete parakeratosis. In the reticular dermis a mixed acute and chronic interstitial, inflammatory infiltrate was observed with several foci of necrosis. These areas of necrosis contained multiple branching septate hyphae, which formed acute angles, and multiple round and oval spores, both of which stained heavily with periodic acid-Schiff (PAS) and Gomori-Grocott stain. Some of the fungal elements invaded the vessel walls. In the subcutaneous tissue several foci of fibrosis with similar fungal structures were present. A biopsy culture was performed on Sabouraud agar with chloramphenicol and was identified as *A. chlamydospora* (colonies growing rapidly, olivaceous-black, fluffy conidiophores up to 150 mm long, 3–6 mm wide, pale brown). No alterations were found on the rays of the chest and paranasal sinuses. The patient was treated intravenously with amphotericin B at a dose of 1 mg/kg/day for 4 days, followed by a lipidic complex of amphotericin B (Abelcet®) for another 18 days at a dose of 5 mg/kg/day, with complete resolution of the lesions.

DISCUSSION

Cutaneous alternariosis is a deep mycotic infection of the skin that has mostly been described in immunocompromised hosts and occasionally in otherwise healthy patients. *A. alternata* is



Fig. 1. Ulceronecrotic lesion on the right arm.

the most common isolated *Alternaria* species, followed by *A. tenuissima*. *A. longipes*, *A. dianthicola* and *A. chlamydospora* have only rarely been reported (1, 2). Infection usually occurs after traumatic inoculation of the skin or, less commonly, by inhalation. The clinical picture of cutaneous *Alternaria* infection is that of a focal eruption of erythematous papules and plaques, which may ulcerate, with a chronic fluctuating course of healing and new lesion formation. Histological features include large septate hyphae, which branch at acute angles and extend from the stratum corneum downwards, and a variable amount of arthrospores. The histological appearance of *Alternaria* may mimic that of *Aspergillus* and they are not differentiated with routinely used Gomori methenamine silver stain. However, using the Fontana-Masson stain, *Alternaria* may be distinguished from *Aspergillus*, because it contains melanin and *Aspergillus* does not. Several antifungal drugs including ketoconazol, itraconazol and amphotericin B, have been used in the treatment of cutaneous alternariosis with varying results. However, relapses do occur and local excision may be an option in resistant cases. The clinical course of the patients with cutaneous alternariosis is usually marked by their underlying disease.

In patients receiving BMT several cases of infection of the paranasal sinuses by *Alternaria* have been described, but only 1 case of cutaneous alternariosis (3). On the other hand, infections due to *A. chlamydospora* are extremely rare and have been reported only twice. None of these patients had received BMT.

The patient described here was neutropenic and was receiving treatment with systemic corticosteroids in a tapering dose because of graft-versus-host disease (GVHD). Although a traumatic inoculation of *alternaria* at the site of the initial lesion can not be ruled out, the development of lesions at distance and the presence of fungal elements within the vessels suggest hematogenous dissemination from a cutaneous focus.

REFERENCES

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