Clinical resolution of *Scedosporium prolificans* pneumonia associated with treatment with liposomal amphotericin B in a patient with acute leukemia

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*Scedosporium prolificans* is a filamentous fungus which has been recently identified as the aetiologic agent of severe infections in patients with haematological malignancies. Due to the resistance of *S. prolificans* to all known antifungals there are very few patients recovering from invasive infections. We describe the case of a patient with acute leukaemia who developed a *S. prolificans* pneumonia successfully treated with liposomal amphotericin B and who underwent autologous peripheral blood stem cells transplantation. The patient is in good health and has shown no evidence of reactivation of *S. prolificans* infection over one year after the transplant. Liposomal amphotericin B may be an effective treatment of pneumonia caused by *S. prolificans* in haematological patients.

**Summary**

*Scedosporium prolificans* is a filamentous fungus which has been recently identified as the aetiologic agent of severe infections in patients with haematological malignancies. Due to the resistance of *S. prolificans* to all known antifungals there are very few patients recovering from invasive infections. We describe the case of a patient with acute leukaemia who developed a *S. prolificans* pneumonia successfully treated with liposomal amphotericin B and who underwent autologous peripheral blood stem cells transplantation. The patient is in good health and has shown no evidence of reactivation of *S. prolificans* infection over one year after the transplant. Liposomal amphotericin B may be an effective treatment of pneumonia caused by *S. prolificans* in haematological patients.

**Key words**

*Scedosporium prolificans*, liposomal amphotericin B

**Case report.** A 33-year-old man was diagnosed with AL in November 1996. During the induction therapy...
he developed erythematous skin lesions which resolved with the addition of amphotericin B (0.5 mg/kg per day, for 20 days) to the empiric broad spectrum antibiotics used and the recovery of neutropenia. The total accumulated dose was 1 g. The patient presented evidence of nephrotoxicity due to the amphotericin B treatment and achieved complete remission.

One month later, during profound neutropenia caused by his second cycle of chemotherapy, he again developed skin lesions in the chest, arms and legs as well as bilateral pneumonia which required supplementary O₂ (inspired fraction, 50%) for adequate oxygenation. Despite treatment with broad spectrum antibiotics (ceftazidime, imipenem, amikacin, TMP-SMZ and teicoplanin), the patient’s condition did not improve and a presumptive diagnosis of fungal pneumonia was made. Liposomal amphotericin B therapy (3 mg/kg per day) was initiated due to the nephrotoxicity caused by conventional amphotericin B used during induction therapy. The treatment was maintained for 16 days and the total accumulated dose was 4.8 g. A bronchoalveolar lavage from the upper left lobe yielded a filamentous fungus identified as S. prolificans. Fever persisted until the time the patient’s neutrophil count recovered. The fungus was resistant in vitro to conventional amphotericin B, 5-fluorocytosine, ketoconazole, miconazole, clotrimazole, fluconazole and itraconazole by a microdilution method [8].

Four months later, the patient was transplanted with autologous PBSC. Recombinant human granulocyte colony-stimulating factor at 5 µg/kg/day was given intravenously from the day after transplantation until the absolute neutrophil count >1000, a situation that was observed at day +10. A follow-up bronchoalveolar lavage performed just before the transplant was negative and the patient had no evidence of recurrence of S. prolificans infection during the rest of his hospitalisation.

Several cases of systemic infections by S. prolificans have been described in two institutions in Spain [2,9], although in one of them they were epidemiologically unrelated [10]. The management of these infections is difficult since the fungus is highly resistant in vitro to all known antifungals. However, it has been recently described the cure of two infections with granulocyte colony-stimulating factor or fluconazole [6,7]. In our patient, the recovery of the neutrophil count and the use of high dose liposomal amphotericin B controlled the S. prolificans infection and allowed the performance of the transplant. Liposomal amphotericin B has been shown to be more active in vitro against several Aspergillus and Candida species than conventional amphotericin B [11] and it allows the administration of higher doses than conventional amphotericin B. Liposomal amphotericin B may be an effective treatment of pneumonia caused by S. prolificans.

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References