Amphotericin B for Visceral Leishmaniasis in Hemodialysis

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Dear Sir,

Visceral leishmaniasis (VL) is usually found in non-compromised hosts. VL has also been reported as a complicating infection in some immunosuppressed patients [1]. However, to our knowledge, no cases of VL have been described in dialysis. We report here the first case of VL in a hemodialyzed patient successfully treated with amphotericin B.

A 43-year-old woman presented with end-stage renal disease due to lupus nephritis in February 1986 and hemodialysis was initiated. In the 3 months preceding admission she received a maintenance dose of prednisone 10 mg daily. In January 1990 she was admitted because of fever, chills and hypotension. She had a blood pressure of 90/50 mm Hg and temperature of 39 °C. Physical examination was normal. Laboratory findings on admission showed: hemoglobin (Hb) 7.1 g/dl, hematocrit 21%, WBC $2.5 \times 10^9/l$, platelets $111 \times 10^9/l$. A chest x-ray film was normal. Cultures of blood and urine were obtained. Cefotaxime and gentamicin were started and prednisone was increased to 1 mg/kg/day. Ten days later the patient persisted with fever and worsening; a severe anemia (Hb 5.4 g/dl) with leukopenia ($1.2 \times 10^9/l$) and thrombopenia ($25 \times 10^9/l$) were observed. Then we detected hepatomegaly 10 cm below the right costal margin and splenomegaly 3 cm below the left costal margin. The results of cultures were negative. A bone marrow aspiration was performed and demonstrated amastigotes of *Leishmania donovani*. Titers of antileishmanial antibodies by indirect immunofluorescence were positive to 1/64. Metronidazole treatment was started, but the patient's condition did not improve. Twelve days later it was withdrawn and amphotericin B was begun at doses of 1 mg/kg every 48 h intravenously through the arteriovenous fistula. After 6 days of treatment (3 doses), fever had disappeared with a striking clinical improvement. Amphotericin B was maintained until a total cumulative dose of 35 mg/kg (1,400 mg). No side effects developed. Bone marrow aspiration and bone marrow culture 3 months after the end of the treatment were negative. Ten months later there has been no relapse and cure seems complete.

Pentavalent antimonials remain the drug of choice for VL. However, more than 90% of the administered dose is excreted in urine in the first 24 h [2] and there are no published data concerning dosage adjustment in hemodialysis. Likewise, the current data on pentamidine are insufficient to make dosage recommendations for patients undergoing dialysis [3]. Amphotericin

B has been employed for treatment of VL [4]. Rees et al. [2] described a case of VL and renal insufficiency successfully treated with amphotericin B. In our experience, amphotericin B is a very effective treatment in VL in hemodialyzed patients. The absence of side effects and the effectiveness of the doses administered in our case can serve as a guide for other hemodialyzed patients with this problem.

References

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