Liposomal Amphotericin B Twice Weekly as Antifungal Prophylaxis in Pediatric Hematologic Malignancy Patients

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**Background:** Data on antifungal prophylaxis in pediatric cancer patients at high risk for invasive fungal disease (IFD) are scant. Intermittent administration of liposomal amphotericin B (LAMB) has been shown to be safe and effective in adult patients with hematological malignancies.

**Patients and methods:** We prospectively evaluated safety and efficacy of prophylactic LAMB at a dosage of 2.5 mg/kg twice weekly in children at high risk for IFD. Efficacy was compared with a historical control group of patients with similar demographics not receiving LAMB prophylaxis.

**Results:** A total of 46 high-risk patients (24 boys; mean age: 7.7 years) receiving 187 episodes of antifungal prophylaxis were analyzed. The median duration of neutropenia (<500/μL) was 10 days. LAMB was discontinued in 4 patients because of acute allergic reactions. Median values of creatinine and liver enzymes at end of treatment did not significantly differ from those at baseline. Hypokalemia (< 3.0 mmol/L) occurred 13.5% of the prophylactic episodes, but was usually mild and always reversible. No proven/probable IFD occurred in patients receiving LAMB prophylaxis. In comparison, 5 proven and 2 probable IFDs were observed in 45 historical controls not receiving LAMB prophylaxis ($P = .01$). LAMB prophylaxis had no impact on the use of empirical antifungal therapy.

**Conclusions:** Systemic antifungal prophylaxis with LAMB 2.5 mg/kg twice weekly is feasible, safe and seems to be an effective approach for antifungal prophylaxis in high-risk pediatric cancer patients.