

Aerosolized Amphotericin B Inhalations as Prophylaxis of Invasive Aspergillus Infections During Prolonged Neutropenia: Results of a Prospective Randomized Multicenter Trial

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We performed a prospective, randomized, multicenter trial to evaluate the effectiveness of prophylactic inhalations with aerosolized amphotericin B (aeroAmB) to reduce the incidence of invasive aspergillus (IA) infections in patients after chemotherapy or autologous bone marrow transplantation and an expected duration of neutropenia of at least 10 days. From March 1993 until April 1996, 382 patients with leukemias, relapsed high-grade non-Hodgkin lymphomas, or solid tumors were randomized with a 13:10 ratio to receive either prophylactic aeroAmB inhalations at a dose of 10 mg twice daily or no inhalation prophylaxis in an unblinded

fashion. The incidence of proven, probable, or possible IA infections was 10 of 227 (4%) in patients who received prophylactic aeroAmB. This did not differ significantly from the 11 of 155 (7%) incidence in patients who received no inhalation prophylaxis ($P = .37$). Moreover, no differences in the overall mortality (13% v 10%; $P = .37$) or in the infection-related mortality (8% v 7%; $P = .79$) were found. In contrast to other nonrandomized trials, we observed no benefit from prophylactic aeroAmB inhalations, but the overall incidence of IA infections was low.

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DURATION OF THERAPY

Dependent upon

- Location of the infection
- Patient's underlying disease
- Response to therapy

DURATION OF THERAPY

- Antifungal therapy generally is continued until signs and symptoms of the infection have resolved for **at least two weeks.**
- The chest radiograph, if initially abnormal, should have stabilized and signs of active infection should have disappeared.
- For most immunosuppressed patients, **antifungal therapy will continue for months**

RELAPSING ASPERGILLOSIS

- ◆ Patients who complete antifungal therapy are still at risk for reactivation of aspergillosis if neutropenia recurs.
- ◆ The pathogenesis of relapsing invasive aspergillosis is thought to be due to reactivation of a latent, subclinical infection that had not been fully eradicated.
- ◆ Secondary to the deep angioinvasive nature of the organism or due to lack of sterilization secondary to poor drug penetration

Hospital course

25/5/09

- เหนื่อยขึ้น ไม่มีไข้ on O₂ mask with bag →
O₂ sat 98-100%
- V/S : T 37.2, RR 50/min
PR 160/min, BP 100/60 mmHg
- Chest & lung : suprasternal & subcostal retraction, decreased right breath sound
- CXR : right Pneumothorax
- Management : right ICD insertion