

## **Novel antifungal agents as salvage therapy for invasive aspergillosis in patients with hematologic malignancies: posaconazole compared with high-dose lipid formulations of amphotericin B alone or in combination with caspofungin.**

**Raad II, Hanna HA, Boktour M, Jiang Y, Torres H, Afif C, Kontoyiannis DP, Hachem RY.**

1Department of Infectious Diseases, Infection Control and Employee Health, The University of Texas M.D. Anderson Cancer Center, Houston, TX, USA.

In patients with hematologic malignancy, invasive aspergillosis continues to be associated with high mortality even when treated with conventional antifungal therapy. To investigate novel antifungal agents, we compared 53 patients who received posaconazole salvage therapy to 52 contemporary control patients who received high-dose lipid formulation of amphotericin B (HD-LPD/AMB at  $\geq 7.5$  mg kg<sup>-1</sup> per day) and 38 other control patients who received caspofungin plus HD-LPD/AMB. Patients in the three groups had similar. The overall response rate to salvage therapy was 40% for posaconazole, 8% for HD-LPD/AMB ( $P \leq 0.001$ ) and 11% for combination therapy ( $P < 0.002$ ). Aspergillosis contributed to the death of 40% of posaconazole group, 65% of the HD-LPD/AMB group and 68% of the combination group ( $P \leq 0.008$ ). By multivariate analysis, posaconazole therapy independently improved response (9.5; 95% confidence interval, 2.8-32.5;  $P < 0.001$ ). HD-LPD/AMB alone or in combination was associated with a significantly higher rate of nephrotoxicity ( $P \leq 0.02$ ) and hepatotoxicity ( $P < 0.03$ ). In conclusion, posaconazole salvage therapy demonstrated greater efficacy and safety than HD-LPD/AMB alone or in combination with caspofungin in the salvage therapy of invasive aspergillosis in hematologic malignancy. *Leukemia* advance online publication, 20 December 2007; doi:10.1038/sj.leu.2405065.

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