



Fluconazole or Posaconazole in Antifungal prophylaxis in Patients with High-Risk Hematological Malignity?

Selçuk Kaya¹, İftihar Köksal¹, Eda Gençalioğlu¹, Mehmet Sönmez², Mustafa Yılmaz², Gürdal Yılmaz¹

¹Karadeniz Technical University, School of Medicine, Department of Infectious Diseases and Clinical Microbiology, Trabzon, Turkey

²Karadeniz Technical University, School of Medicine, Department of Hematology, Trabzon, Turkey.

OBJECTIVE: This study was performed in order to compare the effectiveness in prophylaxis of fluconazole (FZ) and posaconazole (PZ) in patients with high-risk febrile neutropenia (FEN) administered antifungal prophylaxis for fungal infection and monitored with a diagnosis of hematological malignity by our hospital hematology clinic.

MATERIAL-METHOD: At risk classification of patients with hematological malignity, patients with profound neutropenia lasting more than one week were regarded as high risk. High-risk patients in 2011 were administered FZ prophylaxis, while in 2012 PZ prophylaxis was administered by consensus decision of the infectious diseases and hematology clinic. This study retrospectively examined these cases monitored with a diagnosis of FEN and was planned to compare the effectiveness of the two drugs in antifungal prophylaxis.

RESULTS: FZ prophylaxis was administered to 70 patients in 2011. Localized candida infection was identified in seven of these, and rhinocerebral mucormycosis in one. Invasive pulmonary aspergillosis (IPA) was diagnosed in 30 cases, 17 probable and 13 possible. PZ prophylaxis was administered to 49 patients in 2012. Fungal infections developing with *Candida krusei*, *Candida norvegensis* and *Trichosporon beigelii* strains were encountered in three patients receiving prophylaxis. IPA developed in 13 patients, nine probable and four possible. Incidence of fungal infections in all patients receiving FZ prophylaxis was 38/70 (54%), compared to 16/49 (33%) in patients receiving PZ. The difference was significantly lower in favor of patients receiving PZ prophylaxis ($p < 0.05$). A similar situation applies in terms of IPA. Incidence of IPA in patients receiving FZ was 30/70 (43%), and 13/49 (26.5%) in those receiving PZ ($p < 0.05$).

CONCLUSION: The subject of which agent should be selected for prophylaxis in this high-risk patient group is a matter for debate in the literature, and studies exist recommending the use of both drugs. Our study shows that PZ is significantly more effective than FZ in both yeast and mold fungal infections.