

## **The aim of this study was to determine the risk factors for and clinical outcomes of breakthrough yeast BSIs in patients with hematological malignancies in the era of newer antifungal agents” Kim et al (2017).**

### Abstract:

Although yeast bloodstream infections (BSIs) are increasingly being reported in patients with hematological malignancies undergoing antifungal therapy, clinical information regarding breakthrough infections is scarce. The aim of this study was to determine the risk factors for and clinical outcomes of breakthrough yeast BSIs in patients with hematological malignancies in the era of newer antifungal agents.

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Between 2011 and 2014, all consecutive patients with hematological malignancies who developed yeast BSIs were included in a case-control study wherein breakthrough infections (cases) and de novo infections (controls) were compared. Of 49 patients with yeast BSIs, 21 (43%) met the criteria for breakthrough infections. The proportions of *Candida krusei* and *Candida tropicalis* in the cases and controls were significantly different (32% [7/22] vs. 3% [1/29],  $P = .015$ ; 5% [1/22] vs. 38% [11/29],  $P = .007$ , respectively). Acute leukemia, presence of a central venous catheter and neutropenia in the 3 days prior to BSI were significant risk factors for breakthrough infections. Six-week mortality rates was 33% [7/21] in the cases and 43% [12/28] in the controls ( $P = .564$ ). Refractory neutropenia and the Pitt bacteremia score were independent predictors of 6-week mortality. In conclusion, breakthrough infections accounted for a significant proportion of yeast BSIs in patients with hematological malignancies. However, these infections did not increase the risk of death by themselves. Our results suggest that current clinical management of breakthrough yeast BSIs, which includes switching to a different antifungal class and prompt catheter removal is reasonable.

### Reference:

Kim, S.H., Choi, J.K., Cho, S.Y., Lee, H.J., Park, S.H., Choi, S.M., Lee, D.G., Choi, J.H., Yoo, J.H. and Lee, J.W. (2017) Risk factors and clinical outcomes of breakthrough yeast bloodstream infections in patients with hematological malignancies in the era of newer antifungal agents. *Medical Mycology*. May 19th. .

doi: 10.1093/mmy/myx038.

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