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# Delaying amphotericin B-based frontline therapy significantly increases mortality among patients with hematologic malignancy who have zygomycosis.

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BACKGROUND: Zygomycosis is an emerging opportunistic mycosis among immunocompromised patients with a particularly poor prognosis.

METHODS: We analyzed the impact of delaying effective amphotericin B-based therapy on outcome among 70 consecutive patients with hematologic malignancy who had zygomycosis in our institution during the period 1989-2006. We used classification and regression tree analysis to identify the mortality breakpoint between early and delayed treatment.

RESULTS: Delayed amphotericin B-based therapy (i.e., initiating treatment >/=6 days after diagnosis) resulted in a 2-fold increase in mortality rate at 12 weeks after diagnosis, compared with early treatment (82.9% vs. 48.6%); this remained constant across the years of the study and was an independent predictor of poor outcome (odds ratio, 8.1; 95% confidence interval, 1.7-38.2; P = .008) in multivariate analysis. Active malignancy (P = .003) and monocytopenia (P =.01) at the time of diagnosis of infection were also independently associated with a poor outcome, whereas salvage posaconazole-based therapy (P=.01) and neutrophil recovery (P = .009) were predictive of a favorable outcome.

CONCLUSIONS: Because discriminating between zygomycosis and aspergillosis in a timely fashion is difficult, the pursuit of aggressive diagnostic strategies and prompt initiation of antifungal agents with activity against Zygomycetes should be considered for patients with hematological malignancy who are at an increased risk for zygomycosis.

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