A rare non-albicans, Candida intermedia bloodstream infection

Noranati Zulkifli Chia, Tzar Mohd Nizam

Department of Medical Microbiology and Immunology, Faculty of Medicine, Universiti Kebangsaan Malaysia

ABSTRACT

Introduction: Candida species are common nosocomial bloodstream infections, with non-albicans species becoming more prevalent. While common non-albicans Candida species such as Candida glabrata, Candida parapsilosis and Candida tropicalis may cause candidemia and have reduced susceptibility to antifungal agents, much less is known about Candida intermedia. Case Description: An 83-year-old woman, who was admitted for an elective endoscopic retrograde cholangiopancreatography, developed septic shock from a duodenal perforation leading to multiple surgeries and intensive care unit admission. Initial blood cultures isolated Candida krusei, and she was treated with anidulafungin. Despite this and multiple other empiric antibiotics, her condition remained unchanged. Additional blood cultures confirmed the presence of Candida intermedia by MALDI-TOF MS. An empirical amphotericin B therapy was started. Unfortunately, she passed away on the second day of amphotericin B treatment due to sepsis, worsened by acute respiratory distress syndrome resulting from ventilator-associated pneumonia. Discussion: Candida intermedia, commonly found in environmental sources such as cheese surfaces, presents a challenge in bloodstream infections due to its infrequent occurrence. However, its detection in this patient undergoing multiple surgeries and extended hospitalization raises concerns regarding its pathogenic potential. Various identification methods, including gram stain, culture, and MALDI-TOF-MS, confirmed the presence of the isolate. Risk factors for candidemia, including prolonged hospital stays, antimicrobial use, immunosuppressive therapy, and invasive procedures, may contribute to its development. Given the limited knowledge about its clinical implications, further research is necessary to better understand its clinical impact.

Keywords: Candida intermedia, non-albicans Candida, candidemia, bloodstream infection.