

Julie Delaloye and Thierry Calandra (2014). Invasive candidiasis as a cause of sepsis in the critically ill patient. *Virulence* 5:1, 161-169.

Invasive fungal infections are an increasingly frequent etiology of sepsis in critically ill patients causing substantial morbidity and mortality. *Candida* species are by far the predominant agent of fungal sepsis accounting for 10% to 15% of health-care associated infections, about 5% of all cases of severe sepsis and septic shock and are the fourth most common bloodstream isolates in the United States. One-third of all episodes of candidemia occur in the intensive care setting. Early diagnosis of invasive candidiasis is critical in order to initiate antifungal agents promptly. Delay in the administration of appropriate therapy increases mortality. Unfortunately, risk factors, clinical and radiological manifestations are quite unspecific and conventional culture methods are suboptimal. Non-culture based methods (such as mannan, anti-mannan, β -d-glucan, and polymerase chain reaction) have emerged but remain investigational or require additional testing in the ICU setting. Few prophylactic or pre-emptive studies have been performed in critically ill patients. They tended to be underpowered and their clinical usefulness remains to be established under most circumstances. The antifungal armamentarium has expanded considerably with the advent of lipid formulations of amphotericin B, the newest triazoles and the echinocandins. Clinical trials have shown that the triazoles and echinocandins are efficacious and well tolerated antifungal therapies. Clinical practice guidelines for the management of invasive candidiasis have been published by the European Society for Clinical Microbiology and Infectious Diseases and the Infectious Diseases Society of North America.