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Letter to the Editor

Patterns in the epidemiology of candidemia as a consequence of antibiotic and antifungal exposure

Despite huge efforts in infection prevention and control in burns units, candidemia and invasive candidiasis remains a problematic complication that contributes to an added morbidity and possibly mortality [1–5]. Burn patients have the ultimate risk profile for being infected with opportunistic pathogens such as *Candida* [6]. Burn patients experience extensive wounds requiring multiple surgical procedures with substantial blood loss, extended length of hospitalization, prolonged intravascular and bladder catheterization, a catabolic metabolism, and a down-regulated immune function due to excessive and sustained inflammation and blood loss.

We read with interest the article by Zhou et al. concerning risk factors for candidemia in major burn patients [7]. They report on a cohort of 410 burn victims of which 39 developed candidemia. Of note, a worrying trend in occurrence rate was observed over the 6-year study period (from approximately 6% to 17.5%). The authors identified classic risk factors for candidemia such as renal replacement therapy and prior colonization [8]. Broad-spectrum antibiotic therapy, another classic risk factor, was not recognized as associated with candidemia. This however, can be explained by the high use of these agents in the study cohort. Overall, 96% of patients were exposed to broad-spectrum antibiotic agents, thereby leaving no discriminative power to link broad-spectrum antibiotics with an increased risk of candidemia. The high rate of antibiotic use might also be the very reason for the high rate of candidemia [9]. In that regard, we wonder if the authors can provide more information on their antibiotic policy in the burn ICU. For example, do they routinely prescribe antibiotic therapy in all patients burned >20% total burned surface area?

At the same line, the authors report a high rate of antifungal prophylaxis (44%) [7]. We assume this might be the reason for the high proportion of non-albicans *Candida* species (73%) as well as the high rate of reduced susceptibility to fluconazole (36%) as this has been described previously on individual patient level and unit level [10–12]. Therefore, antifungal prescription should be considered an essential part of antimicrobial stewardship.

In this regard we would invite the authors to provide detailed information about their antibiotic/antifungal policy, either in prophylaxis or therapy in order to allow correct interpretation of the data reported. In addition, we wonder if they can link the increasing trend in candidemia with any increase in the use of antimicrobials in recent years.

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