Letter to the Editor concerning Akhavan AA et al., Invasive non-Candida fungal infections in acute burns—a 13-year review of a single institution and review of the literature

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Note: The opinions or assertions contained herein are the private views of the authors, and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

Conflicts of interest: The authors report no conflicts of interest relevant to the content of this manuscript.
Letter to the Editor

Journal of Burn Care and Research


Dear Sir:

In their recent paper, Dr. Akhavan and colleagues describe their experience with non-Candida fungal wound infections. We congratulate the authors for adding to the literature on this difficult problem. Unlike the authors, we have not found screening tests such as 1,3-beta-d-glucan or galactomannan to be accurate and do not routinely perform these tests. (In fact, Shupp et al. reported that gauze dressings, in the absence of fungal infection, causes increased 1,3-beta-d-glucan levels in 50% of burn patients.) We also disagree that histopathology and tissue cultures are unreliable. We use an approach to diagnosis similar to that developed for bacterial burn wound infections. A lenticular full-thickness biopsy, which includes viable tissue, is divided in half. One half is sent for ‘rush’ histopathological evaluation, and one half is sent for tissue culture. The first specimen provides confirmation of fungal infection (invasion into viable tissue) vs. colonization (presence in nonviable tissue only). This distinction has prognostic validity. The second specimen provides identification to the species level, necessary for appropriate antimicrobial selection. Topical antimicrobial care of wounds with suspected fungal infection is problematic; the key to successful management is an aggressive surgical approach. We have not found a Mohs-like excision to be helpful. Rather, excision to fascia,
and in some cases amputation, is required to eradicate this disease. Repeated trips to the operating theater, often daily, are performed until the wounds are free of disease on gross inspection (supported by repeated biopsies according to clinical judgement). Using this approach, we have been able to extirpate even invasive *Mucorales* infections. Above all, expert surgical attention to the wounds is required to achieve early and effective diagnosis and treatment.
References


