Rhino-orbito-cerebral mucormycosis in a child with diabetic ketoacidosis

Sir,

We read the article “Rhino-orbito-cerebral mucormycosis in a child with diabetic ketoacidosis (DKA)” by Kumar et al. with interest. The author reported a 9-year-old girl with DKA and rhino-orbito-cerebral mucormycosis. We want to highlight certain issues regarding diagnosis and management of this child.

The child was diagnosed with rhino-orbital-cerebral mucormycosis after 48 h of admission. Her initial computed tomography (CT) brain was found to be normal. It is not clear whether the CT brain was plain or contrast enhanced. We can understand due to sickness of the child, CT may have been preferred over magnetic resonance imaging (MRI). However in a clinical scenario where cerebral invasion is suspected along with rhinosinusitis, MRI is preferred over CT scan. Contrast enhanced T1-weighed images are helpful in delineating intracranial spread and identifying invasion of cavernous portion of internal carotid artery. The sensitivity of initial CT and MRI in detecting sinusitis is 97% and 100% respectively. However, initial MRI is more sensitive in detecting disease beyond sinuses like extension to orbits, cranium. Since, she developed ophthalmoplegia at 72 h of admission, cavernous sinus thrombosis should be strongly suspected. Involvement of brain stem could not be ruled out as she had right facial palsy with left hemiparesis.

Authors have mentioned amphotericin B as the treatment of choice in mucormycosis, but the current literature suggests that combination antifungal therapy is better than monotherapy in mucormycosis. Reed et al. concluded from a retrospective study that combination of caspofungin-polyene therapy is superior to polyene monotherapy. Addition of echinocandins to polyenes increases the efficiency of polyenes by following mechanisms:

- Disruption of β glucan linking on the cell wall of Rhizopus resulting in better delivery of polyenes
- Altered virulence of fungus by stunting filamentation or altering cell wall contents
- Enhanced host response to the fungus.

The authors have reported mortality of 40% and 10% in mucormycosis with and without cerebral involvement. However, a systematic review showed that children with cerebral, gastrointestinal, disseminated, and cutaneous mucormycosis had mortality of 100%, 100%, 88%, and 0% respectively.

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References
Sir,

We read the article “Nosocomial candiduria in chronic liver disease patients at a hepatobiliary center” with great interest. This article clearly highlights the importance of repeat sampling in patients who are reported as having candiduria. Candiduria represents single site infection (cystitis or ascending pyelonephritis or renal candidiasis) as discussed in this article. Taking a cult one and should be interpreted in the light of repeat sample after insertion of fresh catheter eliminates the chances of contamination, but colonization can still be present without any clinical manifestation of disease. [2,3]

Currently, there is a paucity of literature regarding nosocomial candiduria. The study also reports that 11 (3.5%) patients of chronic liver disease patients at a hepatobiliary center” [1] with Candida colonization. It would have been enlightening if natural history. Whether all chronic liver disease patients includes various etiologies and stages of evolution in its predisposition for invasive candidiasis, but multiple site colonization and should not trigger initiation of treatment unless the patient is at high risk of invasive candidiasis (neutropenia, low birth weight, and patients with Candida colonization. Crit Care Med 2006;34:730-7).

Nosocomial candiduria is mainly prophylaxis. Treating asymptomatic candiduria in high risk patients involves hematogenous spread as well as discussed in this article. Whether all chronic liver disease patients were also mentioned in this study.

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Candiduria can occur due to contamination, differentiation between the colonization and infection is blurred, more so in critically ill patients. The chances of contamination, but colonization can still be present without any clinical manifestation of disease. [2,3] Heavy colonization is considered more significant than colonization has been shown to be a risk factor. [4,5] Combined polyene-caspofungin treatment of rhino-orbital-cerebral mucormycosis. Clin Infect Dis 2008;47:364-71.

The potential of repeat sampling in patients who are reported as having candiduria is highlighted in this article. This is particularly important for invasive candidiasis. When suspecting hematogenous infection, one should look for predisposing factors like presence of surgical procedures, broad spectrum antibiotic use, old age, and diabetes mellitus.

