

## A Rare Case of Nosocomial Urinary Tract Infection due to *Trichosporon asahii*

Sir,

Disseminated infection by *Trichosporon asahii*, though rare, has been reported increasingly in immunocompromised hosts.<sup>[1-4]</sup> There are only sporadic reports of infections caused by *T. asahii* reported from India.<sup>[3,4]</sup> We report a case of successful management of *T. asahii* infection with orally administered fluconazole in a patient of UTI.

A 58-year-old diabetic and hypertensive male patient was admitted to the hospital with sudden onset CVA. The patient was catheterized immediately and started on intravenous ceftriaxone and amikacin. The computerized tomographic scan (CT scan) of the patient revealed mild ischemia in the left parietal lobe for which he was managed conservatively and was responding well, until the fifth day, when he developed fever associated with spikes. His blood parameters were as follows: hemoglobin 8.85 g/dL, total leukocyte count 13,700/mL, fasting and postprandial blood sugars 180 g/dL and 240 mg/dL respectively, urea 48 mg/dL, and creatinine 2 mg/dL. The Gram stain examination of the patient's urine sample showed plenty of pus cells and septate hyphae with arthroconidia. The urine sample was inoculated with a standard loop on blood and MacConkey agar and incubated overnight. Tiny, creamy white, dry wrinkled colonies were observed on blood agar, the next day with a colony count of  $>10^5$  colony-forming units (CFU/mL). The Gram stain of the colony revealed septate hyaline hyphae with arthrospores

and few budding yeast cells. The colony was subcultured on a set of Sabouraud Dextrose Agar (SDA) and incubated at 28°C and 37°C. At both these temperatures, colonies of yeast-like fungus were obtained in pure culture. Two more repeat urine sample analyses revealed a similar picture. The yeast was identified to be *T. asahii* with cornmeal agar morphology, hydrolysis of urea, carbohydrate fermentation assimilation tests and nitrate assimilation test.<sup>[3]</sup>

On the basis of the culture report, antifungal therapy with fluconazole was initiated and the condition of the patient improved dramatically. Within 4 days of therapy, the urinary complaints were resolved. After 4 weeks of antifungal treatment, the urine sample was sent for repeat fungal culture and it was found to be negative for the fungus.

Isolation of the same yeast in three consecutive urine samples with significant counts, along with a significant number of pus cells, establishes *T. asahii* as an aetiological agent of urinary tract infection. Also the clearance of the fungus from the urinary tract with recovery of the patient following catheter removal and antifungal therapy further confirms the yeast as the cause of UTI. Our patient also exhibited risk factors such as the presence of an indwelling catheter, use of broad spectrum antibiotics, and the presence of comorbid conditions such as diabetes, hypertension, and anemia. It is possible that the organism colonized the catheter from the human flora during catheterization and subsequently caused UTI.

Data on *T. asahii* antifungal susceptibility are limited, but azoles have good activity against the fungus.<sup>[5]</sup> The isolate in our study was found sensitive to fluconazole. Further studies are needed to define optimal approaches to facilitate earlier treatment, which will improve patient outcomes.

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DOI:  
10.4103/0974-777X.83541