Candida auris: An emerging, azole-resistant pathogen causing candidemia in South Africa

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Background: Candida auris is an unusual, emerging species which was first isolated from a patient with a discharge from the external ear canal. Isolation of clonal strains of C. auris from patients at different hospitals in Korea and India suggest that inter- and intra-hospital transmission of infection due to this species occurs. C. auris is closely related to Candida haemulonii and the Metschnikowiaceae clade. It has been mis-identified as Metschnikowiaceae occurs.

Methods & Materials: Four isolates from patients with candidemia admitted to different hospitals in South Africa were analysed. These isolates were sent to National Institute for Communicable Diseases for identification to species-level. Identification was undertaken using ChromAgar Candida medium, Vitek 2 YST, API 20C Aux and sequencing of ITS and D1/D2 domains of the rRNA gene, followed by broth microdilution susceptibility testing for nine antifungal drugs.

Results: All four isolates were misidentified as Candida haemulonii and Rhodotorula glutinis using Vitek 2 YST and API 20C AUX assays respectively. Pairwise alignment of both ITS and D1/D2 domains using the CBS KNAW fungal diversity database showed 98%-99% sequence homology to Kuwaiti and Indian C. auris isolates. All isolates had high fluconazole minimum inhibitory concentrations. Amphotericin B and echinocandins had good activity against C. auris.

Conclusion: Accurate identification of C. auris, C. haemulonii and closely related species is particularly important because of reduced susceptibility to fluconazole.

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