

P2386 Invasive fungal infections caused by a novel species *Trichosporon dohaense*: the first investigation of the pathogen caused invasive infections worldwide and mycological characteristics

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Background: *Trichosporon dohaense* is rare isolated and not described as a human invasive pathogen. *T.dohaense* was only reported as a causative pathogen of cutaneous infections by Taj-Aldeen SJin in Qatar in 2009 and Abdel-Sater MA in Egypt in 2016.

Materials/methods: In this study, We encountered two patients of *T.dohaense* invasive infection in the two hospital in the National China Hospital Invasive Fungal Surveillance Net program (CHIF-NET) (2010-2014).The patients' medical chart were detailed reviewed, and the clinical features of infection following hospital admission established. Patient isolates were characterized by phenotypic methods, VITEK MS and Bruker Biotyper MS system and sequencing of the ITS and IGS regions of the ribosomal gene; antifungal susceptibilities were determined by broth dilution methodology according to the CLSI M27-A3 document.

Results: On chromogenic agar, *T.dohaense* isolates exhibited completely different color and morphology from any kind of species of *Trichosporon* genus. Both isolates were misidentified as *Trichosporon asahii* and *Trichosporon inkin* respectively by the VITEK 2 YST system. The two *Trichosporon dohaense* were correctly identified with 100% sequence similarity to the database sequences by ITS, but we could not identify by IGS1 sequence, which appeared to be a powerful tool for differentiating between phylogenetically very closely related species of *Trichosporon* genus, by querying the sequences against GenBank database with BLASTn. The VITEK MS and Bruker Biotyper MS misidentified the two isolates as *T. ovoides/asteroides* or *T. ovoides* and *T. domesticum* respectively. The three echinocandins had no in vitro activities against all isolates (MIC \geq 8 μ g/ml).Fluconazole MICs were 0.5 and 8 μ g/ml; isolates were more susceptible to itraconazole, voriconazole, amphotericin B. MICs were 0.064 and 0.125 μ g/ml for voriconazole, 0.125~0.25 μ g/ml for itraconazole and 0.25~0.5 μ g/ml for amphotericin B.

Conclusions: *Trichosporon* species have been reported as emerging pathogens and usually occur in severely immunocompromised patients. The study is the first report of invasive infection cause by novel species *Trichosporon dohaense* worldwide. We summarized the microbiological and molecular characteristics of *T.dohaense* in the study.