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Acta Medica Iranica

2009;47(4): 25-32

Performance of Five Phenotypical Methods for Identification of Candida Isolates from Clinical Materials

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Abstract:

Although Candida albicans is the most common etiologic agent of candidiasis, C. dubliniensis, has been emerged, as another pathogen resembles C. albicans in many phenotypic aspects and noted for its in vitro potential for fluconazole resistance. Since there was no evidence of any report about detection of this organism in Iran, this study was designed to use of five different tests for identification of Candida species with special reference to C. dubliniensis among 313 suspected Candida isolates in Tehran, capital of Iran. Overall, 199 (63.6%) C. albicans and 114 (36.6%) Candida spp. were identified. All 199 C. albicans isolates were found germ tube and chlamydospore positive. Different shades of green color colonies were yielded on CHROMagar Candida of which 23 (11.6%) showed dark green color indicative of C. dubliniensis. All but four C. albicans isolates grew well at 45 °C. These 4 isolates beyond to 23 dark green colony producers were suspected of being C.dubliniensis, later examined by API 20C AUX system. The results indicated that all 27 isolates were able to assimilate both xylose and a-methyl-D-glucoside, therefore these isolates were identified as C. albicans. Overall, C. dubliniensis had not been found in present study. It must be concluded that no single phenotypic test has proven to be highly effective, and the use of several tests may be necessary of these two closely related Candida species for definitive identification.

Keywords:

Phenotypic markers . Candia species

TUMS ID: 2157

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