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Abstract (publication only)

Epidemiological study on species spectrum and antifungal susceptibility profile of vaginal isolates of candida in Kuwait

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Background: Candida vaginitis (VVC) is the commonest infection necessitating visit to a gynecologist. There are several reports, which indicate that 80%-90% cases of VVC are caused by *C. albicans*. However, other Candida species are emerging as causes of VVC and differ with regard to epidemiology and antifungal drug susceptibility. The study was undertaken to determine the prevalence of VVC among our patients, frequency of different Candida species & their susceptibility to antifungal drugs. **Materials & methods:** Prospective study from November 2010 through April 2011 conducted at obstetrics and gynecology clinics in Farwania area of Kuwait. Women with vaginitis were recruited for this study with a completed pre-distributed questionnaire. Cotton-tipped swab (Copan innovation, Italy) was used to collect the sample, where a Gram-stained smear and a wet mount were prepared before being cultured on to 5% sheep blood agar, chocolate agar, Sabouraud dextrose agar containing chloramphenicol and CHROMagar Candida (Mast Diagnostics, UK). Species identification was done by Vitek2 yeast identification system (BioMerieux, France) or API 32C (BioMerieux, France). All isolates were tested for susceptibility against amphotericin B, flucytocine, fluconazole, voriconazole, posaconazole and caspofungin by E-test (AB Biodisk, Solna, Sweden) according to manufacturer's recommendation. **Results:** 1752 high vaginal swabs were received for culture. 392 (22.4%) were found to be positive for yeast infection. Final identification was as follow: *C. albicans* (n = 153), *C. glabrata* (n = 44), *C. tropicalis* (n = 4), *C. parapsilosis* (n = 2), *C. krusei* (n = 2), *C. keyfr* (n = 4), *C. guillermondi* (n = 2), *C. dubliensis* (n = 1) and *Saccharomyces cerevisiae* (n = 1). Susceptibility test results concluded that *C. albicans* strains were uniformly susceptible to most of the agents. *C. glabrata* presented MIC50 and MIC90 of 4 mg/L and 8 mg/L against fluconazole and 1 mg/L and 6 mg/L against posaconazole, respectively. There were 5 strains of *C. glabrata*, which were resistant to posaconazole (MIC 6-32 mg/L). *C. krusei* showed higher MICs against fluconazole and flucytocine. **Conclusion:** The findings are in support with the continued use of azole agents for empirical therapy of uncomplicated VVC. However, a larger controlled study is required to determine the role of non-*C. albicans* in recurrent VVC.