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## Identification of *Candida* species in patients with oral lesion undergoing chemotherapy along with minimum inhibitory concentration (MIC) to fluconazole

Parvin Dehghan, Mehrnoush Maheronnaghsh, Sepideh Tolouei and Mostafa Chadeganipour  
Isfahan University of Medical Sciences, Iran

**Introduction:** In the past two decades, various species of *Candida*, especially *Candida albicans* was known as the most important etiological agent of fungal infections. Oral candidiasis is the most common fungal infection in patients undergoing chemotherapy. The purpose of this study was to identify *Candida* species in patients with various types of cancer and testing antifungal susceptibility of clinical isolates.

**Materials & Methods:** Isolated yeasts were identified on the basis of colony morphology and pigmentation on CHROMagar *Candida* and also by PCR- RFLP method. The ITS1-5.8SrDNA-ITS2 region was amplified using universal primers and subsequently products were digested with the restriction enzyme MspI. The minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC) of each species to fluconazole was compared.

**Results:** Among 385 patients with various types of cancer who were hospitalized in Seyed Al-Shohada, Isfahan, Iran. Fifty five (14.3%) showed oral lesions. Oral candidiasis confirmed in 36 cases by direct examination and culture. *Candida albicans* and *non-albicans* represented in 26 (72.2%) and 10 (27.8%) of the isolates respectively. *Non-albicans* species were *Candida glabrata* (n: 5), *Candida kefyr* (n: 3), *Candida krusei* (n: 1) and *Candida stellatoidea* (n: 1). Thirteen (76.5%) of *Candida-albicans* and 4 (23.5%) *non-albicans* isolates were resistant to fluconazole. The majority of isolated *candida* in patients with gastrointestinal cancers 7 (87.5%) and lymphoma 4 (66/6%) were identified as resistant *C. albicans*.

**Conclusion:** Data were shown that *C. albicans* is the most commonly identified species in oral candidiasis and majority of fluconazole resistant *C. albicans* were found in patients with gastrointestinal cancer and lymphoma. Therefore we recommend an alternative drug instead of fluconazole as a first line of treatment for these type of cancers and administration of fluconazole in patients undergoing chemotherapy should be prescribed in accordance with the type of cancer.

### Biography

Parvin Dehghan has completed her MS and PhD in Medical Mycology from Tehran University of Medical Sciences, in Iran. She has mastered a range of molecular techniques in Sydney University, Australia (2006). She has worked and taught in Faculty of Medicine, Isfahan University of Medical Sciences for more than 27 years. She has published more than 28 papers in reputed journals in English and Persian languages.

dehghan@med.mui.ac.ir

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