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Identification of *Candida* species in diabetic patients and non-diabetic controls with CHROM agar *Candida* and PCR-RFLP

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Background: Diabetic patients are more susceptible to oral candidiasis infection than non-diabetic groups due to the factors promoting oral *Candida* in carriage. Several factors are the dilative of the colonization of *Candida* species in the oral cavity, such as xerostomia, which reduce the salivary flow and salivary pH disorder.

Aim: The objective of this study was to evaluate the presence and identification of candida spp. with CHROM agar *candida* and PCR-RFLP using *Hinf*I and *Msp*I restriction enzymes.

Methods: Samples from saliva and mouth lesions were collected from 106 individuals from June 2014 to September 2015, which were consisted of two groups: Diabetic patients (n=58) and non-diabetic (n=48) as the control group.

Results: In this study, oral candidiasis frequency in diabetic patients in relation to non-diabetic ones was more due to factors that promote oral *Candida* flora in diabetic patients. The frequency of *candida* species in diabetic patients group was *Candida albicans* (36.2%), *C. krusei* (10.4%), *C. glabrata* (5.1%) and *C. tropicalis* (3.4%), respectively. Likewise, *C. albicans* was the most frequent species (27%) in non-diabetic oral individuals.

Conclusion: Nutritional disorders, such as diabetes mellitus are considered as the important predisposing factor for oral candidiasis. The objective of this study is to determine the distribution of candidal species in the oral cavity with CHROM agar *candida* and PCR-RFLP in order to evaluate the amount of yeasts colonized in diabetic patients compared with non-diabetic individuals for improving patient treatment outcomes and reducing healthcare costs.

Biography

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

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