

## عنوان مقاله:

Molecular identification and in-vitro antifungal susceptibility testing of *Candida* species isolated from patients with onychomycosis

## محل انتشار:

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## خلاصه مقاله:

**Background and Purpose:** *Candida* species are the most opportunistic fungi affecting the nails and resulting in onychomycosis. In this study, we identified and evaluated in-vitro susceptibility of the recovered isolates against fluconazole (FLC), voriconazole (VRC), and clotrimazole (CLT) using the Clinical and Laboratory Standards Institute (CLSI) M27-A3 document. **Materials and Methods:** From patients with either clinically or mycologically proven onychomycosis, 97 isolates comprising of seven *Candida* species were isolated, which were identified by both conventional and molecular techniques such as polymerase chain reaction-restriction fragment length polymorphism. In addition, *Candida dubliniensis* was confirmed by restriction endonuclease analysis. Antifungal susceptibility of each isolate against the three azoles applied in this study was determined using the CLSI microdilution reference method M27-A3. **Results:** *Candida parapsilosis* (*C. parapsilosis*) was the most frequently isolated species (n=44), followed by *C. albicans* (n=23), *C. tropicalis* (n=13), *C. glabrata* (n=7), *C. krusei* (n=6), *C. guilliermondii* (n=3), and *C. dubliniensis* (n=1). All the isolates were susceptible to CLT. VRC had lower minimum inhibitory concentration (MIC) values for the isolates compared to FLC. Geometric mean MIC values of VRC, FLC, and CLT for *C. parapsilosis* isolates were 0.07 µg/ml, 0.8 µg/ml, and 0.35 µg/ml, respectively. Collectively, all species exhibited greater susceptibility to VRC in comparison to *C. albicans* ( $P \leq 0.001$ ). **Conclusion:** This study showed that non-*albicans* *Candida* species were the most common etiologic agents of non-dermatophyte onychomycosis. The major antifungal agents used in clinics to

empirically treat yeast onychomycosis are FLC and CLT. Our data suggested that CLT is a better choice for the .treatment of Candida onychomycosis, especially in drug resistant cases

### کلمات کلیدی:

candida albicans, Candida dubliniensis, Candida parapsilosis, Clotrimazole, Fluconazole, Onychomycosis, voriconazole

### لینک ثابت مقاله در پایگاه سیویلیکا:

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