

## **Candida parapsilosis and candida guillermundii: Emerging pathogens in nail candidiasis**

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### **Abstract**

**Background:** Onychomycosis of the fingernails and toenails is generally caused by dermatophytes and yeasts. Toenail mycoses involve mainly dermatophytes but when *Candida* is also involved, the strain most commonly isolated worldwide is *C. albicans*. **Aims:** To determine *Candida* strains prevailing in onychomycosis. **Materials and Methods:** A retrospective, observational and descriptive study of fungal cultures retrieved from the registry of the microbiology laboratory of the Pontificia Universidad Católica was performed. Specimens obtained from patients attending the healthcare network between December 2007 and December 2010 was analyzed. **Statistical Analysis:** A descriptive statistical analysis was performed. **Results:** *Candida* was retrieved from 467 of 8443 specimens (52% fingernails and 48% toenails). Cultures were negative in 5320 specimens (63.6%). Among *Candida*-positive cultures, *parapsilosis* was the most commonly isolated strain with 202 cases (43.3%). While isolates of *Candida guillermundii* were 113 (24.2%), those of *Candida albicans* were 110 (23.6%), those of spp. were 20 (4.3%) and there were 22 cases of other isolates (4.71%). Among the 467 patients with positive cultures for *Candida*, 136 (29,1%) were men and 331 (70,9%) were women. All patients were older than 18 years old. Clinical files were available for only 169 of the 467 patients with positive cultures for *Candida*. For those, age, gender, underlying illnesses and use of immunossupresive agents during the trial was reviewed. **Conclusions:** The present study shows that both *C. parapsilosis* as well as *C. guillermundii* appear as emerging pathogens that would be in fact taking the place of *C. albicans* as the most commonly isolated pathogen in patients with *Candida* onychomycosis. The relative percentage of *C. parapsilosis* increases every year. Identification of *Candida* strains as etiological agents of nail candidiasis becomes relevant to the management both nail as well as systemic candidiasis, in view of the resistance to conventional treatments readily reported in the literature.