

TITLE: IDENTIFICATION OF CANDIDA IN HANDS AND BUCCAL MUCOSA OF THE HEALTH PROFESSIONALS IN TWO HOSPITALS OF NATAL, RN, BRAZIL

AUTHORS: CASTRO, M.C.A.; INÁCIO, C.P.; ARANTES, T.D.; THEODORO, R.C.

INSTITUTION: UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE, NATAL, RN (AVENIDA SENADOR SALGADO FILHO, 3000 – CANDELARIA, CEP 59066-800, NATAL – RN, BRAZIL).

ABSTRACT:

Disseminated candidiasis is a public health issue. Unlike other *Candida* species, *Candida parapsilosis* complex (*C. parapsilosis sensu stricto*, *C. orthopsilosis* and *C. metapsilosis*) is frequently isolated from hands of health professionals, who install and maintain medical devices. The aim of this research was perform for the first time in the state of Rio Grande do Norte, the isolation and identification of *Candida* spp. from the hands and buccal mucosa of the health professionals from the ICU of Hospitals Giselda Trigueiro and Monsenhor Walfredo Gurgel from Natal / RN. Hands and buccal mucosa samples were collected every two weeks from august 2015 to august 2016, using sterile swabs suspended in 1 ml sterile saline solution (NaCl 0.85%). The identification of the species was previously performed by Chromagar, ITS1-5.8S-ITS2 sequencing and PCR of the VMA *intein* (for distinguishing among the species from *C. parapsilosis* complex). There was growth of *Candida* genus in 24 of the 196 samples of hands and mouth, of which 10 (5%) were *C. albicans*, 9 (4%) *C. parapsilosis*, 3 (2%) *C. tropicalis* and 2 (1%) *C. glabrata*. In the other samples, 144 (74%) no growth was observed in Sabouraud-dextrose plus chloramphenicol, 23 (12%) presented contaminating mycelium, 1 (1%) black yeast and 1 (1%) yeast *Rhodotorula* spp. There were no remarkable difference between *Candida* isolates from the different ICUs. *C. albicans* was the most frequent yeast species in mouth (64%), while *C. parapsilosis* complex followed by *C. tropicalis* (60 and 30% respectively) were the most frequent *Candida* species in hands. Among the three species of the complex, *C. parapsilosis sensu stricto* was the most prevalent. Our research showed that the presence of yeast colonizing health professionals is worrisome. There is a need for the permanent education of these professionals, so that they are aware of the importance of personal protective equipment (PPE) and hand washing as a control of the transmission and cross infection when performing any assistance to the patient.

Keywords: *Candida* spp., *parapsilosis* complex, Rio Grande do Norte, ICU professionals samples.

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