

Environmental Yeasts in the University Hospital of Botucatu Medical School, São Paulo, Brasil (UNESP), Located in the South-Central Region of São Paulo State.

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Abstract:

Fungal infections caused by yeasts are a major problem in the hospitalized patients in intensive care units (ICUS) in the world and have become the important cause of morbidity and mortality. Although *C. albicans* is the most frequently isolated species and its form of infection usually occurs by the endogenous translocation, it has observed an increase of the non-albicans species, especially *C. parapsilosis*, whose main form of infection is exogenous, probably by the hands of health professionals. This study aimed to characterize yeasts isolated in the hospital environment (air, physical surfaces and hands of health professionals) in the Central and Neonatal ICUS in the University Hospital of Botucatu Medical School, São Paulo. Ten collects were carried out monthly from July 2014 to April 2015, using the MAS-100 sample (MERCK®) for air samples, Rodac Plates for the surfaces and sterile swabs for the hands. The samples were cultured in the Sabouraud Dextrose Agar, seeded in Chromagar medium for the preliminary identification and then identified by VITEK-2 (BIOMÉRIEUX®) and also by DNA sequencing (ITS and/or D1/D2 regions of rDNA). In the Central ICU, 32 yeasts were isolated, wherein in the surfaces it was observed: *C. guilliermondii* (13); *C. parapsilosis* (6); *Trichosporon asahii* (2); *Saccharomyces cerevisiae* (2); *C. albicans* (2); *C. tropicalis* (1); *C. intermedia* (1), *Cryptococcus laurentii* (1) and *Rhodotorula glutinis* (1); in the hands of health professionals: *C. parapsilosis* (2) and *Rhodotorula mucilaginosa* (1); and with no isolated yeasts in the air. In the neonatal ICU, 18 yeasts were isolated, wherein in the surfaces it was observed: *C. guilliermondii* (9), *C. parapsilosis* (4), *Rhodotorula mucilaginosa* (1) and *Cryptococcus laurentii* (1); in the air: *C. parapsilosis* (1) and *Rhodotorula glutinis* (1) and in the hands: *Rhodotorula glutinis* (1). The molecular technique confirmed the identity of the isolates previously identified by morphophysiological methods (Chromagar and VITEK-2) and also identified the inconclusive ones. The data point to the physical surfaces as an importance reservoir of opportunistic yeasts, *C. guilliermondii* as the most frequently isolated species and the repetitive occurrence of *C. parapsilosis* in the surfaces, air and the hands of health professionals.

Keywords: *Candida albicans*; *Candida parapsilosis*; *Candida* spp.; molecular identification; hospital environment.

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