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Characterization of Genus Candida Yeasts Isolated from Oral Microbiota of Brazilian Schoolchildren with Different Caries Experience

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Abstract : The importance of yeast infections has increased in recent decades. The monitoring of Candida yeasts has been relevant in the study of groups and populations. This research evaluated 31 Candida spp. isolates from oral microbiota of 12 Brazilian schoolchildren coinfected with Streptococcus mutans. The isolates were evaluated for their ability to form biofilm in vitro and molecularly characterized based on the sequencing of intergenic spacer regions ITS1-5,8S-ITS2 and variable domains of the large subunit (D1/D2) regions of the rDNA, as well as ABC system genotyping. The sequencing confirmed 26 lineages of Candida albicans, three Candida tropicalis, one Candida guillhermondii and one Candida glabrata. Genetic variability and differences on in biofilm formation were observed among Candida yeasts lineages. At least one Candida strain from each caries activity child was C.albicans genotype A or Candida non-albicans. C. tropicalis was associated with highest cavities rates. These results indicate that the presence of C. albicans genotype A or multi-colonization by non albicans species seem to be associates to the potentialization of caries risk.

Keywords : biofilm, Candida albicans, oral microbiota, caries
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