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Prevalence of Candida albicans and carriage of Candida non-albicans in the saliva of preschool children, according to their caries status.

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Abstract

OBJECTIVE: This study was conducted to establish associations among the **Candida** carriage rate, the diversity of **Candida** species carried and the different **caries** status of preschool children.

MATERIALS AND METHODS: Sixty-one children between 2 and 5 years of age were examined by a single expert examiner and were divided into three groups, the **caries**-free, moderate **caries** and severe **caries** groups, according to the criteria of the International **Caries** Detection and Assessment System II (ICDAS). Saliva samples were obtained from the members of each group and were plated on Sabouraud agar plates to assess the **Candida** carriage rates. CHROMagar **Candida** medium was used for the preliminary screening. Biochemical testing or PCR/sequencing was conducted to identify the different **Candida** species in the samples. The differences observed were considered significant if the p value was <0.05.

RESULTS: The **Candida** carriage rate and the number of species of this fungus carried were higher in the group with the highest level of **caries** severity ($p < 0.05$). Whereas **Candida** albicans was the most predominant **Candida** species in the saliva of all of the children, C. dubliniensis was identified only in the most **caries**-affected group in addition to other rare species of **Candida** non-albicans.

CONCLUSIONS: A high salivary **Candida** carriage rate and the presence of specific species of this fungus (such as C. albicans and C. dubliniensis) appear to be related to the severity of **caries** experienced by preschool children.

KEYWORDS: **Candida** species; ICDAS II; carriage; **dental caries**

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MeSH terms, Substance

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