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<th>Antifungal activity of lactoferrin and lysozyme against Candida species</th>
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Effect of Some Antifungal Drugs on Adherence of Candida albicans.

S. KANHACHANOK, W. BUNJEJ, R. SURATI and B. THAVISOON (Faculty of Dental Disease, University of Khon Kaen, Thailand).

The aim of this study was to compare the effect of 4 antifungal drugs: miconazole, clotrimazole, ketoconazole, and clotrimazole on adherence of Candida albicans to human buccal epithelial cells (BEC) in vitro. Epithelial cells were collected from the buccal mucosa of normal male adults with glass slide method. Cells were cultured in Eagle's MEM medium supplemented with 10% fetal calf serum. After 24 h, BEC were established. Confluent monolayers of BEC were pelleted by centrifugation (380 x g, 10 min) and plated in 6-well tissue culture plates with 0.2 ml of medium containing 3 x 10^5 BEC/well. The antifungal drugs were added to the medium at the concentrations of 0.01 and 0.1 mg/mL, and the adherence of C. albicans to BEC was monitored at 24 h. The drug efficacy was calculated as the percentage of drug-inhibited adherence compared to the control.

Results: The adherence was significantly inhibited by all drugs at the higher concentration. The order of drug efficacy was as follows: clotrimazole > miconazole > ketoconazole. The difference between drug efficacy at the higher concentration was not significant.

Conclusion: Clotrimazole and miconazole have a higher efficacy than ketoconazole in inhibiting the adherence of C. albicans to BEC. These findings suggest that antifungal drugs may be effective in preventing oral candidiasis.

Role of detergent polypeptides in Candida albicans biofilm development in vitro.

H. NIKAMA, H. HAYASHI, T. YAMANISHI, T. HAMADA and L.I. SAMARANAYAKE. (Fukuoka University, Japan; Hong Kong University, Hong Kong).

There is little data on the long-term activity of Candida albicans biofilm on mucosal surfaces. This study evaluated the role of detergent polypeptide in Candida albicans biofilm formation on tissue and in-vitro conditions. The objective was to determine if detergent polypeptides are involved in the adherence of C. albicans to tissue and plastic surfaces.

Methods: The adherence of C. albicans to tissue and plastic surfaces was determined using a suspension containing 10^7 CFU/mL. The adherence was evaluated after 24 h of incubation at 37°C.

Results: The adherence of C. albicans to tissue and plastic surfaces was significantly higher than the control group. The adherence of C. albicans to tissue and plastic surfaces was significantly inhibited by the addition of detergent polypeptides (500 µg/mL).

Conclusion: Detergent polypeptides play a role in the adherence of C. albicans to tissue and plastic surfaces. These findings suggest that detergent polypeptides may be involved in the development of Candida albicans biofilms on mucosal surfaces.

Antifungal activity of lactoferrin and lysozyme against Candida albicans. Species Y. H. SARANAMARAYAK, F.WU and L.P. SAMARANAYAKA. (Department of Pathology and Oral Biology, University of Hong Kong).

Lactoferrin and lysozyme are non-immune defence factors present in polymorphonuclear leukocytes and various mucous secretions including saliva. Previous studies have shown that these proteins either singly, or in combination are bactericidal in nature and their combined activity is synergistic. Few workers, however, have studied these interactions with Candida albicans and therefore evaluated the susceptibility of 20 oral isolates of C. albicans to lactoferrin and lysozyme: the combined activity of the two proteins was assessed against one isolate from each of the above groups. The results showed that the combined activity was significantly higher than the activity of the single protein. The viable cells of the last remaining strain were assayed for lactoferricin and lysozyme.

Clinical comparison between a manual and an electronic periodontal probe.

S. PICHAMMA, J. NERNE, U. PLATZER (University of Hamburg, Faculty of Dentistry, Department of Operative Dentistry and Periodontology, Hamburg, Germany).

Pocket depth is an important clinical aspect in the diagnosis of periodontitis. The degree of accuracy and reliability is stronger if the measurement is performed with the electronic probe. Electronic probes are more accurate and reproducible than the manual probe. However, there is a strong influence on the accuracy and reliability of the measurement. This study compared the accuracy and reliability of the measurement between a manual and an electronic probe.

Methods: A total of 100 patients with periodontitis were enrolled in the study. Pocket depth was measured with a manual probe and an electronic probe. The same examiner performed all the measurements.

Results: The accuracy of the measurement was significantly higher with the electronic probe. The inter-examiner agreement was also significantly higher with the electronic probe.

Conclusion: Electronic probes are more accurate and reliable than manual probes. However, the accuracy and reliability of the measurement are influenced by the examiner's experience. Therefore, it is important to train examiners to use electronic probes correctly.