The antifungal properties of chlorhexidine digluconate and cetylpyridinium chloride on oral Candida

Type: Article

Abstract:

Introduction: C. tropicalis and C. krusei have emerged as virulent species causing oral infections. Both have developed resistance to commonly prescribed azole antifungal agents. Objective: The study aimed to determine the effect of mouth rinses containing chlorhexidine digluconate (CHX), cetylpyridinium chloride (CPC) and their combination (CHX-CPC) on the growth of these strains. Methods: The minimal inhibition concentrations (MIC) of the mouth rinses were determined. The growth curves of the strains produced under the mouth rinse-treated and untreated conditions, as well as alterations to the morphology of the growth colonies and cells following the treatments were compared and analysed. Results: The MICs of CPC compared to CHX mouth rinses were found to be lower for both Candida sp. In the mixed formulation, CPC doubled the inhibitory effect of CHX towards both Candida sp., while CHX quadrupled the activity of CPC towards C. tropicalis. The growth colonies also appeared coarse, wrinkled and dried. Conclusion: The profound effects shown may suggest the fungicidal activities of the mouth rinses incorporated with CHX, CPC or their combination on both C. tropicalis and C. krusei. Gargling using mouth rinses with such fungicidal activity would enhance a rapid reduction in the candidal population of patients with fungal infection.

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