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Comparison of Antifungal Activities of Gentian Violet and Povidone-Iodine Against Clinical Isolates of Candida Species and Other Yeasts: A Framework to Establish Topical Disinfectant Activities

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Abstract

We evaluated antifungal activity as assessed by the contact time in topical use of gentian violet (GV) and povidone-iodine (PI) against Candida strains. A total of 102 yeast isolates were used in this study. A markedly lower minimal inhibitory concentration (MIC)(90) of GV than of PI was detected for all yeast isolates. No remarkable difference in the MICs was observed among the identical strains isolated from different clinical sites for both GV and PI. Although the minimal fungicidal activities (MFCs) of PI were identical for all tested time points, the fungicidal activity of GV decreased during the time course of incubation. These results indicate that, whereas GV is more effective than PI, the topical disinfectant efficacy of GV should be estimated using the MFC(5 min) and not the MIC or the MFC(24 h) for overall prevention of catheter-related bloodstream infections and oral infections.