

Evaluation of Anti-fungal effect of Nanoparticles within different types of acrylic resin denture bases

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Abstract

This study was carried out to evaluate the antifungal activity of two types of nanoparticles against *Candida albicans* which is a major causative organism of denture stomatitis. Silver nanoparticles and copper oxide nanoparticles, incorporated in two types of acrylic resin materials used in prosthodontics, which are: heat cured thermoset denture base (vertex), and heat cured thermoelastic acrylic resin (versacryl). Three concentrations (0.1, 0.3 and 0.5%) of each nanoparticle were added to both materials and antifungal activity were tested by direct contact technique. The results showed that silver nanoparticles offered the greatest antifungal activity than copper oxide nanoparticles within limit of certain concentrations till complete inhibition of candidal growth with higher concentrations, and the antifungal activity increased by increasing the percentage of nanoparticles incorporated within the materials.

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