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Evaluation of Antifungal Efficacy of Aloe vera Treated Long Term Acrylic Based Self Cured Soft Liner Bonded to Heat Cured Acrylic Resin and Its Effect on Shear Bond Strength & Tear Strength at 12% Concentration –An Invitro Study

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ABSTRACT:

Background & objectives: Complete dentures still remain a viable treatment option for edentulous patients. Dentures become ill fitting over a period of time due to residual ridge
resorption and this need periodic relining. Relining materials are prone to fungal growth and debonding from acrylic which limits its long-term use in these patients.

Aloe vera has been shown to have anti-fungal properties but few studies are available regarding its effect to counteract candida albicans growth upon soft liners. This study attempted to assess the anticandidal efficacy of 12% phytochemical extract of Aloe vera incorporated into soft liner & its impact upon shear bond strength, and tear strength.

Method: 12% Aloe vera gel was incorporated in the soft liner, anticandidal efficacy, Shear bond strength & tear strength of aloe vera treated soft liner was carried out.

Results: Results showed statistically significant reduction in the adherence of candida albicans when soft liner was treated with 12% phytochemical extract of aloe vera & significantly increased the shear bond strength & also its tear strength of the liner bonded to the heat cure acrylic specimens

Interpretation & conclusion: Aloe vera treated liner showed significant decrease in Candida albicans CFU's in comparison to control group with mean in experimental & control group being 1460 & 5021, P value being < 0.001 & it also showed significant increase in shear bond strength & tear strength in the experimental group with mean value being 0.378 & 9.764 respectively when compared to the control group with mean value being 0.182 & 7.156.

key words: Soft liners, Candida albicans, Aloe vera, shear bond strength, Tear strength

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