



Journal of Prosthodontics Dentistry
 An Official Publication of Bureau for Health & Education Status Upliftment
 (Constitutionally Entitled As Health-Education, Bureau)

Effect of Aqueous Extract of *Andrographis paniculata* on Inhibition of Adhesion of *Candida Albicans* to Denture Acrylic Resin: An In-Vitro Study

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ABSTRACT:

Aim: To investigate the effect of aqueous extract of *Andrographis paniculata* (*A. paniculata*) on the inhibition of adhesion of *Candida albicans* to denture acrylic resin.

Methods and Material: Transparent acrylic strips were prepared and divided into three groups (n=10) with pre-treatment by aqueous extract of *A. paniculata* at 1: 10 µl, 1: 50 µl and 1:100 µl dilutions, respectively for 30 minutes. After washing, the strips were then inoculated with *C. albicans* (ATCC13803) (10^7 cells/mL). Normal saline solution and 2% chlorhexidine gluconate were used as negative and positive controls, respectively. Stained the strips with modified Gram stain without counterstain. Adherent yeast cells were direct counted under microscope at 40X magnification (Olympus- CX31, Japan) in 20 randomly selected fields on each strip.


Statistical analysis used: One-way ANOVA and Tukeys's test at a significance level of $P < 0.05$.

Results: The results obtained indicates that the pretreatment of denture acrylic surfaces with different dilution of aqueous extract of *A. paniculata* leaves significantly reduced the adhesion of *C. albicans* compared with those treated with NSS, which was the negative control Chlorhexidine gluconate, a positive control, which produced highest inhibitory effect among all the groups.

Conclusion: The results indicate that soaking acrylic dentures in 1: 10 µl aqueous extract of *Andrographis paniculata* for 30 mins would have potential to reduce candidal adhesion and may be a useful adjunct to treat candida-associated denture stomatitis and help to prevent recurrence of the infection.

Key-words: Denture Cleansers , Denture Stomatitis , Nilavembu

Key Message: The aqueous extract of *Andrographis paniculata* can be used as a denture disinfectant or in the form of mouth rinses for the prevention of denture stomatitis.

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Website: http://heb-nic.in/jopd	
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