SDM
College of
Dental Sciences
& Hospital

"TO EVALUATE THE EFFECT OF DENTURE CLEANSERS ON THE SURFACE ROUGHNESS OF HARD DENTURE BASE MATERIAL – AN INVITRO STUDY."

By

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ABSTRACT

Background: Maintaining denture wearers' oral hygiene is a challenge for modern dentistry. Biofilm on dentures has been associated with denture stomatitis, malador, *aspiration pneumonia, infectious endocarditis, gastrointestinal infection* and chronic obstructive pulmonary disease. Chemical methods use immersion of dentures in different cleaning solutions. Moreover the solution can reach undercuts of the denture base that are difficult to clean mechanically, hence resulting in more efficient cleaning.

Objective: The purpose of the study undertaken was to evaluate the effect of denture cleansers on the surface roughness of hard denture base material.

Methodology: A total of 100 heat cure acrylic resin specimens were fabricated with dimensions 30 mm x 15 mm x 3 mm in length, width and thickness respectively. All specimens were distributed into four groups randomly. Regular tap water was used as the control group. Three commonly prescribed denture cleansers were used in this study as per the manufacturer's instructions. Surface roughness was determined prior to immersion and after immersion in denture cleansing solutions using contact profilometer. The data was subjected to statistical analysis using paired t test, one-way ANOVA and Tukeys multiple posthoc tests.

Results: The change in surface roughness of acrylic samples immersed in Clanden group was statistically significant ($p<0.05$) at individual group level. However, the change in surface roughness of acrylic samples after immersion when compared between the groups viz. Control, Clinsodent, Clanden and Fittydent; was not statistically significant ($p>0.05$).

Conclusion: Within the limitation of this study, the three denture cleansing materials *namely Clinsodent powder, Clanden tablet and Fittydent tablet are safe to be* prescribed as denture cleansers.

Keywords: Denture hygiene; denture cleanser; acrylic resin; surface roughness.