

**AN INVESTIGATION INTO THE EFFECT OF DENTURE ADHESIVE ON
INCISAL BITE FORCE OF COMPLETE DENTURE WEARERS USING
PRESSURE TRANSDUCERS-A CLINICAL STUDY.**

By

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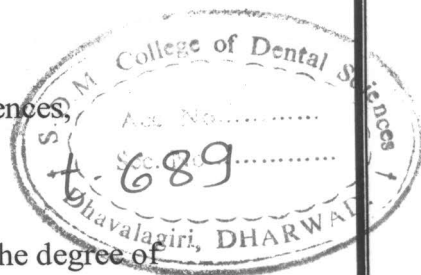
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Background and Objectives: The denture adhesives are used to improve retention, stability, function and comfort of the patient. Denture adhesives are one of the controversial topics in the Prosthodontics. This in vivo quantitative study was conducted to determine and assess the effect of different type of denture adhesives on the incisal bite force of complete denture wearers, until the dislodgement of upper denture, using pressure transducer.

Methodology: 30 patients were included in this study. Based on the Kapur's method of scoring denture retention and stability, these patients were divided into 3 groups- Group A - Clinically good dentures; Group B - Clinically fair dentures; and Group C - Clinically poor dentures. A custom made occlusal force meter was constructed based on the load cell type of pressure transducers. Fixon powder adhesive, Fittydent paste adhesive and Superpoligrip Adhesive strips were used in the study. Denture adhesives were applied on the tissue surface of denture base and patients were asked to wear the dentures and bite in centric occlusion for 15 minutes. Complete denture wearers were asked to bite on the load cell and the readings of incisal bite force were recorded. These readings were subjected to statistical analysis.

Results: The incisal bite force of total number of 30 complete denture patients, without application of any type of adhesive, was found to be 1.7853 kgs (± 0.6357) whereas the incisal bite force of complete denture patients after the application of powder adhesive, paste adhesive and adhesive strips was found to be 3.287 kgs (± 0.2020), 5.2387 kgs (± 0.7071), 3.1380kgs (± 0.1601) respectively. The incisal bite force was also evaluated separately for different groups. The readings of incisal bite force were subjected to statistical analysis using paired student t- test, ANOVA test and Tukey HSD test.

Interpretation and Conclusions: Denture adhesives improved the incisal bite force of complete denture wearers significantly. Fittydent paste denture adhesive was found to be more effective, in improving the incisal bite force of complete denture wearers, than that of Fixon powder adhesive and Super Poligrip Adhesive strips. Fixon powder adhesive was found to be more effective than the Super Poligrip denture adhesive strips. The improvement in incisal bite force was found to more in Group C than Group B and Group A.

Keywords: Pressure transducer, occlusal force meter, denture adhesive strips, paste adhesive, powder adhesive.

6. Discussion

7. Conclusion

8. Summary

9. Bibliography

10. Annexure