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Assessment of Bite Force and Masticatory Efficiency in Flexible Partial Dentures: An In-Vivo Study

Kanwar IS, Bhasin A, Mantri SS, Wagh SA
Department of Prosthodontics and Crown & Bridge, Hitkarini Dental College and Hospital, Jabalpur, M. P. India

ABSTRACT

The aim of the study is to find the effect of flexible denture base material on bite force and masticatory efficiency in partially edentulous patients. The patients aged between 25 to 50 years were recruited from the Department of Prosthodontics. The inclusion criteria was Kennedys Class III partially edentulous condition, with missing first molar in any one quadrant of mouth, to be restored with flexible RPD with full set of remaining natural teeth. Biting force was measured bilaterally in first molar region, on the dentate side and the prosthetic side using a customized digital gauge. Masticatory efficiency was evaluated bilaterally on the basis of the degree of standardized food sample fragmentation. The mean bite forces in the test side was less (8.04±3.39 N) as compared to the non-test side with bite force with 31.22±3.40 N inferring significant difference between the groups. The masticatory efficiency was also significantly less on the test side as compared to the non-test side. The amount of filtrate material left in the test side was more in comparison to the non-test side. The comparison of maximum bite force and masticatory efficiency have concluded that there is a direct co-relation between their two parameters