Evaluation of Retention for Implant Retained Mandibular over Denture using Two Different Denture Base Materials

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Abstract

Objectives: This study was made for measuring and comparing the Retention of implant retained mandibular overdenture using resilient attachment with two different denture base materials (flexible and conventional acrylic resins). Methods/ Statistical Analysis: Twenty male patients selected for this study with completely edentulous mandible and divided according to the type of denture base material used into two equal groups, both groups received implant retained overdenture with resilient attachment. Group I; denture base made from conventional acrylic, Group II; denture base from thermo-elastic flexible acrylic, retention evaluation was made zero time, two months and four months after insertion. Findings: In this study, there was no statistical significance of difference between the groups, at time of insertion, 2 and 4 months after insertion. The highest values of retention were enlisted with the overdenture made from them oplastic acrylic resin and that may due to high inter facial surface tension recorded values of thermoplastic acrylic resin. Strong tension increase retention of the prosthesis in place. Flexible acrylic denture base showed better retention values and function than denture base made from heat cured acrylic resin material and it is agreed with another study which proved that retention values of Thermo-elastic resin was higher than conventional resin as the Thermo-elastic resins have greater flexibility, adaptation and fitting values than conventional resin. So, it has an improved retention because of inter-facial surface tension effect. Application/Improvements: Using overdenture base made of thermo-elastic acrylic resin clinically better than using overdenture base made of conventional acrylic denture base in retention and function.

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