

Registration for 15th international conference

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Title: Fixation of modified magnet assembly to denture base using soft resins

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Abstract

Introduction:

Special care must be taken during the fixation of magnetic assembly because the denture may become impossible to remove from the abutment teeth or implant due to the PMMA resin's hardening within the undercut around the keeper. The aim of this study has been to investigate the fixation strengths and attractive forces of magnetic assemblies to denture bases using soft resins considering long term use.

Materials and Method:

Magnetic assemblies with different undercut and three resins (modified PMMA resin, temporary resin, and conventional PMMA resin) as fixation materials to magnetic assembly were prepared in this study. Tensile testing was performed to evaluate the fixation strength and the attractive force of magnetic assembly using the resins after repeated insertion/removal fatigue testing. The data of fixation strengths and attractive forces were analyzed using a two-way ANOVA, Tukey's multiple comparison and t-test ($\alpha=0.05$).

Results and Discussion:

Modified PMMA resin was detached from magnet assembly during fatigue testing. Temporary filling resin and conventional PMMA resin demonstrated constant attractive force without removing the magnetic assembly after

repeated insertion/removal fatigue testing until 50,000 cycles. When resin and temporary filling resin integrated to modified magnet assembly, it might be suggested to less detachable from denture bases for long term.

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