

# DENTAL EDUCATION

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## The effect of two different solitary attachments used to retain implant assisted mandibular distal extension removable partial over denture on abutment alveolar bone height changes

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**Objectives:** This clinical comparison study compared between different designs of solitary attachments used to retain implant assisted mandibular distal extension RPD regarding alveolar bone height changes around abutment teeth.

**Methods:** Twelve patients with mandibular Kennedy Class I were selected for this study. The remaining natural teeth were extended from the first premolar on one side to first premolar on the other side. One implant was placed in each first molar region bilaterally. The removable partial dentures were retained anteriorly by RPA clasp design and posteriorly either by ball attachment (group I) or by OT-equator attachment (group II). Alveolar bone height changes around the primary tooth abutments were radio graphically evaluated using cone beam volumetric CT.

**Results:** Regarding bone loss around the primary abutment teeth, Ball attachment group ( $0.72 \pm 0.15$ ) significantly ( $p$  value=0.008) showed less crestal bone resorption when compared to OT-equator attachment group ( $1.01 \pm 0.25$ ).

**Conclusion:** Within the limitation of this study and regarding the preservation of abutment teeth, the use of ball attachment may be the suitable choice for anchoring distally extended removable partial denture to dental implants with improved longevity of the natural tooth abutments.

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