

Marginal bone loss and survival rate of immediately loaded mandibular 2-implant overdentures retained by magnetic attachments: 3 years follow-up

Miyayasu A¹, Kanazawa M¹, Shimada R¹, Iwaki M², Sato Y¹, Minakuchi S¹

¹Gerodontology and Oral Rehabilitation, Tokyo Medical and Dental University

²General Dentistry, Tokyo Medical and Dental University

Abstract

Purpose: The aim of this study was to compare marginal bone loss and survival rate, between immediately and conventionally loaded mandibular two-implant overdentures retained by magnetic attachments.

Method: Nineteen participants with edentulous mandibles were randomly assigned into either an immediate loading group or conventional loading group. Each participant received two implants in the interforaminal region with flapless surgery. In the immediate group, each implant was connected keepers and loaded with mandibular overdentures on the same day of implant placement. In the conventional group, the implants were connected to healing abutments. The healing abutments were replaced with keepers and loaded with overdentures. The marginal bone loss was measured at immediate, 6-month, 1-year, 2-year and 3-year after implant placement using digital X-rays. To compare the marginal bone loss of two groups, Mann-Whitney U test was performed. To compare the survival rate of two groups, log-rank test was performed.

Result & Discussion: There is no significantly difference between marginal bone loss at every evaluation time. One patient in the conventional group withdrew 1 month after implants placement because of implant failure. Therefore the 3-year accumulate survival rate is 100% and 89% for immediate group and conventional group respectively, and there is no significantly difference between the groups.