

# The 15th International Conference on Magnetic Applications in Dentistry

## General Paper Abstract form

**Title:** Randomized controlled clinical trial of immediately loaded mandibular 2-implant overdentures retained by magnetic attachments: Masticatory performance

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### **[Purpose]**

The aim of this 1-year study was to compare the masticatory performance between immediate and conventional loading mandibular two-implant overdentures retained by magnetic attachments.

### **[Material and methods]**

Nineteen mandibular edentulous participants were randomly allocated into 2 groups: immediate loading group and conventional loading group (prostheses were loaded on the same day or 3 months after implant surgery, respectively).

The masticatory performance was measured through mixing ability using color-changeable chewing gum and shearing ability using gummy jelly. The assessments were performed at baseline, 1, 2, 3, 4, 5, 6, and 12 months after surgery. The difference in masticatory performance before and after implantation was compared by Wilcoxon, and the median differences between baseline and each monthly score were compared using the Mann–Whitney U test.

### **[Results and discussions]**

In both groups, there were significant improvements in masticatory performance 12 months after implant treatment. Immediate loading group showed higher scores of mixing and shearing ability than conventional loading group, but the difference was not statistically significant. In addition, the immediate loading mandibular overdenture tends to improve mixing ability earlier than that observed with a conventional loading protocol.

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