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Immediate loading of two unsplinted implants retaining the existing complete mandibular denture in elderly edentulous patients: 1-year results from a multicentre prospective cohort study

Key words *ball abutments, freestanding implants, immediate loading, mandibular overdenture*

Purpose: To evaluate the outcome of two freestanding implants immediately loaded retaining an existing mandibular complete denture in elderly edentulous patients up to 1 year after loading.

Materials and methods: 42 patients with a mean age of 76.5 years (range 71 to 89) were selected for stabilising their mandibular complete denture with two implants placed mesial to the mandibular canine position bilaterally. Individual ball abutments were connected and torqued at 30 Ncm and the existing complete denture was immediately attached. No postoperative limitations to chewing function were given. The patients were evaluated clinically and radiographically at implant placement and at 6- and 12-month follow-up examinations.

Results: At the 12-month follow-up no implant failed. Peri-implant bone resorption was 0.203 mm (CI 95% 0.322; 0.086) after 6 months and 0.298 mm (CI 95% 0.425; 0.173) after 12 months. Of the 42 cases, 3 had major prosthetic complications and 5 patients required minor extra maintenance appointments.

Conclusions: Within the limits of this study, it can be suggested that the immediate loading of two unsplinted implants retaining the existing complete mandibular denture in elderly patients can result in favourable implant survival and peri-implant bone healing, however larger and longer follow-ups of 5 years or more are needed.