
Use of Impladent dental implants in edentulous jaws

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Purpose of this 2 year study was to evaluate the efficacy of the Impladent system in the treatment of edentulous jaw with overdentures supported by ball attachments, screw-retained bars and magnetic attachments.

During the period from September 1993 to April 1996, we applied the Impladent implantation system to 54 patients with an indication "edentulous jaw" (28 male and 26 female patients), aged from 35 to 74 years. The average age was 55.6 years. We replaced the upper dental arch of 17 patients and the lower dental arch of 30 patients, seven patients had both arches replaced. We had at our disposal ball attachments with Ceka nylon matrix and a metal adaptor, Dyna system of magnetic fixation (magnets identified as 500g) and the Preci-Horix bar with plastic sliders. After the delivery of a prosthetic replacement, all patients were included in an out-patient programme, including examinations carried out after one, three, six and nine months and then annually. Each year an additional x-ray examination was carried out.

We applied a total of 180 screw or cylindrical implants with hydroxyapatite coatings Impladent, 85 in the maxilla and 95 in the mandible, on average 3.3 implants per patient. We monitored implants for a period of 1 – 32 months after their insertion (19.0 months on average) and 1 – 27 months after the completion of the healing phase (13.6 months on average). Osseointegration failure only occurred in two implants, the success rate therefore being 98.8%. The healing phase was successful for 98.7% of cases in the maxilla, and 98.8% of cases in the mandible (considering only implants with the healing phase completed). After this period, no other implants were extracted.

All patients with ball attachments, clips and temporary bridges reported satisfaction with the outcome. Concerning the group with magnetic attachments, 12 of them reported being satisfied (48.0%), 4 of them were quite satisfied (16.0%) and 9 of them were not satisfied (36.0%) at all. The reason for their discontent was an inadequate retention of the replacement in eight cases (magnetic implants were replaced with other type of attachments). One patient was not satisfied with the aesthetic properties. The remaining 4 replacement were not evaluated, having lost contact with those out-patients.

Discussion: We are particularly satisfied with the successful osseointegration rate. The success rate of 98.9% places Impladent among the world's top-quality products in comparison with the results of other studies. Without any doubt, one of the greatest factors in this success is the hydroxyapatite coating. Together with other authors, we found the vague and poorly demonstrated claims questioning the quality of hydroxyapatite implant coatings to be poorly justified. Time will prove whether these objections are valid or whether these claims are simply due to commercial considerations.

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