

Immediately restored single post extractive implants: clinical outcomes of a retrospective analysis with 8- 10 years follow-up

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BACKGROUND: This study evaluated retrospectively the outcomes of immediately restored single post-extractive implants over a period of 8–10 years. The clinical records of 62 consecutive patients (mean age 53.2 years; range 40-77 years), rehabilitated with single implants placed in fresh extraction sockets (40 maxillary/22 mandibular) were analyzed. All implants were functionalized using an immediate protocol. Outcome measures were implant failure, peri-implant radiographic bone level changes, peri-implant mucosa conditions and gingival aesthetics.

RESULTS: The final follow-up interval was 9.1 years (range 8-10.6 years). Three implants (4.8% of total) failed, one implant in mandible and two implants in maxilla. No difference in implant failures was registered between maxillary and mandibular implants ($p=0.967$). Mean marginal bone levels at implant placement and at the last follow up were 0.02 ± 0.04 mm and 1.23 ± 0.43 mm, respectively. Mean marginal bone remodeling averaged 1.21 ± 0.52 mm. Peri-implant mucosa was healthy for the most (98.3%) of implants. At 10 years, patients had mesial and distal papilla index scores of 2 or 3 for 84.8% and 81.4% of implants, respectively.

CONCLUSION: The results of this retrospective long-term study proved excellent survival rate of immediately restored single post-extractive implants as well as favorable marginal bone response and soft tissue conditions.

Osseointegrated dental implants are placed traditionally following a two-stage protocol (1). This approach involves healing periods of several weeks to months between tooth extraction and implant insertion and again between implant insertion and loading. Successful osseointegrated dental implants are anchored directly to the bone. However, in the presence of micromovement, a soft-tissue interface may encapsulate the implant, causing its failure (2). To minimise the risk of soft tissue encapsulation, some clinicians have recommended keeping implants unloaded. This conventional approach requires longer treatment periods, multiple surgeries, increasing

cost. Early attempts to load implants earlier were associated with increased failure rates (1). In 1990, the first longitudinal study was published showing that implants could be loaded immediately (3). Recently, a Cochrane systematic review suggested that there was no convincing evidence of a clinically important difference in prosthesis failure, implant failure or bone loss associated with different loading times of implants (4). In order to contain micromovements and avoid soft tissue encapsulation, implants should be splinted together and/or implants should gain a high level of primary stability (5). Since rigid splinting is possible in multiple unit restorations, several

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