To overcome the disadvantages of staged implant surgery and treatment, immediate loading concepts as well as flapless surgery approaches have been introduced in the last years. Specifically, promising results in terms of high success rates and remarkable esthetic outcomes have been reported for implants placed in extraction sockets and immediately loaded via provisional restorations. These techniques completely avoid a provisional removable denture and focus on preservation of the existing osseous and gingival tissues through immediate function or at least structural support.

The study examined the clinical performance of Astra Tech OsseoSpeed implants and its transgingival components in a one-stage procedure with immediate provisionalization in the esthetic zone.

In this prospective, bicenter study, 71 Astra Tech OsseoSpeed implants were inserted in 37 patients. All patients received immediate prosthetic restorations. Primary outcome variables were implant success, marginal bone levels and Pink Esthetic Score (PES).

Mean primary stability at time of implant insertion was 24 Ncm; 7 further implants had to be excluded because of insufficient primary stability for immediate provisionalization (below 15 Ncm). There were 3 implant failures. Overall cumulative success rate was 95.6%. Mean follow-up for surviving implants was 12.4 months (range 4 to 24 months). Marginal bone loss averaged about 0.3 mm from the time of implant insertion to the 1-year follow-up. Mean PES ratings improved from 10.3 preoperatively to 11.6. In 83% of the implant sites it was possible to keep the gingival esthetics stable or even to improve it from the pre-operative examination to the final follow-up.

Survival rates and esthetic results suggest proof of principle for immediate provisionalization with Astra OsseoSpeed implants. Although marginal bone levels show small adaptive changes within the first year, PES ratings remained stable or improved in the vast majority of patients.

References

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