

8 Summary

The aim of this retrospective study was to evaluate treatment outcome (survival rate, hard and soft peri-implant tissues, prosthetic aftercare) for 39 implant-supported bar-retained overdentures of 182 implants. No implants or restorations in the mandible and one implant in the maxilla failed during the observation period. The marginal bone loss was 1.2 mm after 5 years.

The results of clinical evaluation showed statistical significant differences between gingivitis, keratinized mucosa and the marginal bone loss.

The radiographic assessment showed no statistical significant differences in mesial and distal alveolar bone loss depends on periodontal pathogens, the implantposition (maxilla/ mandible; mesial/ distal).

As mechanical complications at the implant-prosthetic components retention losses of the protheses (31%) appeared , an unstability of protheses (13%) and the screw loosening (9%). Abutment- and implant fractures could not be documented.

The available study shows that spark erosion a suitable proceeded, in order to passivate suprastructures. Nevertheless no significant difference between the alveolar bone loss on spark eroded and did not spark eroded bars determined.