

**Complication rate with prosthodontic reconstructions on ITI and IMZ dental implants.  
Internationales Team für Implantologie.**

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The aim of this study was to compare the complication rate of two implant systems with different prosthodontic concepts: rigid conical or resilient support of the suprastructure. In 66 patients, 138 ITI implants were inserted whereas 31 patients received a total of 50 IMZ implants. Over an average observation period of 3.5 years (range from 0.5 to 8 years), not only was implant survival recorded, but also prosthodontic complications such as screw loosening, fractures of screws, inserts (intramobile elements, intramobile connectors) and abutments, as well as fractures of metal framework and veneers. With the ITI system, 28.8% of all devices placed exhibited such problems during the observation period. With the IMZ system, this rate was significantly higher ( $P < 0.05$ ), in that 77.4% of all reconstructions required a repair at some point. The various complications were divided into those occurrences which affected only the suprastructure, i.e., failures of frameworks, veneers, bar devices or other retentive elements, and those which involved implant components per se, such as screws and abutment components. In the first category, adverse effects occurred more frequently with ITI-supported prostheses (15.1%) versus IMZ suprastructures (6.4%). Regarding complications with implant components, the rate with IMZ components was considerably higher (71%) compared with ITI (13.5%). This was mainly due to the presence of intramobile elements (IME) and connectors (IMC) in the IMZ system. In this retrospective study, precise fitting, non-resilient abutment components leading to rigid connections of suprastructures, proved to be clinically more successful than resilient anchoring components.

PMID: 9590945 [PubMed - indexed for MEDLINE]