Material and methods: 16 patients received 27 SLA-ITI implants at sites (15 molar, 12 premolar) with 2–5 mm bone height on at least one proximal implant side. Bone was drilled until 1 mm of the sinus floor, the Schneiderian membrane was then carefully elevated with osteotomes. Bone quality was 9 × TypeII, 11 × TypeIII, 7 × TypeIV. Implant length was 1 × 6 mm, 2 × 8 mm, 24 × 10 mm, ∅4.1 mm implants were 23; 4 were ∅4.8 mm. After healing of 61–127 days (mean 95.1days) abutments were tightened at 35 Ncm. If resisting abutment tightening, implants were loaded and radiographically followed for crestal bone loss (CBL).

Results: During implant placement, membrane perforation occurred twice. All implants achieved primary stability and maintained it after 2–4months. All implants but one (typeIV after 104days) resisted abutment tightening, it was left to heal and osseointegrated. 15 implants have been loaded for 3 months, 7 for 6 months. 2 implants showed CBL on the mesial side down to the first thread.

Discussion and conclusion: Implant primary stability could be achieved through sinus elevation with osteotomes without grafting material. After 2-4months and despite reduced bone height, all implants but one resisted 35 Ncm. CBL following 3–6months of loading was minimal despite limited bone support.

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Sinus lift procedures with a surgical microscope. A preliminary report

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Introduction: In the posterior maxilla, the presence of the sinus can limit the residual bone height for standard implant placement. Sinus floor elevation with grafting material is indicated to recover sufficient bone height. The main complication of this invasive and complex procedure is membrane perforation. Several techniques have been proposed to avoid membrane perforation like ultra-sonic debridement, piezo-bone surgery, the use of vaso-constrictive solutions and endoscopy. We report here on the use of a surgical operating microscope.

Material and methods: Eleven sinus lifts have been performed in 8 patients, 4 males and 4 females (mean age 57 y). A Leica M400 microscope was used during bone window preparation with rotating instruments, during membrane elevation and bone grafting with deproteinized bovine bone mineral. The common working magnifications were × 10 and × 16; × 25 and × 40 magnifications were used for access to details.

Results: Membrane perforation was avoided in all cases. Magnification, co-axial illumination, and colour filters to reduce glare were useful during all steps of the grafting procedure. Endosinusal vision, perception in details of the sinus anatomy and identification of septa eased access to the sinus, membrane elevation, bone grafting and documentation.

Discussion and conclusion: Ergonomical operating position was an additional advantage. Inconveniences of the method were the limited depth and field of vision. A learning curve was necessary to overcome these limitations. Membrane perforation rates up to 20–30% have been described; with the microscope, membrane perforation was avoided in all cases. The surgical microscope seems useful to avoid membrane perforation.

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1-Year clinical results with three-dimensional surface on stepped-screw implants

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Introduction: Prerequisite for new bone synthesis at the implant interface is cell adhesion and proliferation. Recent studies revealed that grit-blasted and high temperature etched surfaces showed the best results regarding the influence of the micromorphology on the initial cell contact. Since July 2003, FRIALIT® CELLplus implants (DENTSPLY Friadent Mannheim, Germany) have been placed in 10 international centers to investigate the clinical performance of the new surface. The aim of this poster is to present the one year outcome of this clinical use.

Material and methods: The data of 150 implants and 77 patients were documented and evaluated. To enhance the clinical situation, 29% of the patients underwent an augmentation procedure prior to the implant placement and 47% were augmented simultaneously. After an average healing time of 7,8 weeks the implants were recovered, the prosthetic restoration was fabricated and inserted. The first recall has been carried out after approximately 4 month.

Results: All implants healed uneventful. In two patients three implants were not osseointegrated. Average crestal bone loss was less than 1,5 mm at the first recall. The evaluation of the peri-implant soft tissue was also uneventful with an appropriate esthetic result if desired. The diverse regions of the jaws did not influence the outcome.

Conclusion: The insertion and the management of the implant with the microstructure characteristics were not influenced by the new surface preparation. The initial results show a high confidence even in more critical indications such as immediate extractions sides, early loading or after implant loss.

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