Call for Abstracts:
ITI Research Competition.

We invite you to submit an abstract for either a poster presentation or an oral presentation at the ITI Research Competition.

Each of the six oral presentations will last 10 minutes followed by a two-minute Q&A session. Abstracts for the Research Session are to be prepared in English and submitted by December 31, 2009.

All abstracts must be submitted using the form attached below. Only abstracts that are submitted electronically using this form will be accepted for consideration.

Speakers must choose a main category for their paper:

- Prosthodontics
- Surgical
- Basic Research
- Clinical Research
- Dental Lab techniques

Although two different categories may be possible, please select the one that represents the main focus of your presentation.

A prize of CHF 2,000 will be awarded for the best oral presentation as well as a CHF 1,000 prize for the best poster presentation in each category on the basis of scientific merit.

The entrance fee to the World Symposium 2010 will be paid for all speakers and poster presenters who are accepted.

The research competition is open to all clinicians and investigators – there is no age limit.

Please send your submission by email to:

events@iticenter.ch

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Abstract Submission: ITI Research Competition.

Category: (select one)	☐ Prosthodontics	☐ Surgical	☐ Basic Research
	☒ Clinical Research	☐ Dental Lab techniques	
Type of Presentation:	☒ Oral presentation	☐ Poster presentation	
Title:	Osteotome sinus floor elevation with and without grafting material in the extremely resorbed maxilla. A 1-year prospective randomized pilot study with Straumann TE SLActive implants (ITI Foundation grant n°428/2005).		
Presenter:	Rabah NEDIR		
Co-Authors:	Nathalie NURDIN, Serge SZMUKLER-MONCLER, Jean-Pierre BERNARD, Mark BISCHOF		
Key-Words:	Tapered implant, SLActive surface, grafting material, sinus augmentation procedure		

Content:

number of characters including spaces 4'000

Aim: Rehabilitation of the posterior maxilla is challenging. Beneath a certain residual bone height (RBH), sinus elevation is indicated to increase initial bone height at implant placement (Jensen 1998). The lateral window technique is the most reported augmentation procedure; because less invasive, the osteotome sinus floor elevation (OSFE) technique is gaining popularity. The endo-sinus bone gain after OSFE has been well documented (Brägger et al. 2004; Toffler 2004; Lundgren et al. 2004; Nedir et al. 2006, 2009), however no randomized study compared so far the OSFE technique with and without grafting material in terms of implant predictability and changes in bone levels. The aim of the present study was: 1) to evaluate the viability of OSFE with short tapered SLActive implants in atrophic posterior maxillae (RBH ≤ 4mm), 2) to compare radiological bone remodeling level changes around implants placed with and without bone grafting material.

Materials and Methods: Thirty-seven TE® SLActive implants (Straumann AG), 4.1/4.8 mm in diameter and 8 mm in length, were placed in 12 patients to rehabilitate 5 premolar and 32 molar maxillary sites. The mean RBH was 2.4±0.9 mm (range 0.9-4.0 mm). Prior to surgery, 20 implants (10 patients) were randomized into control group and received Bio-Oss® as a grafting material (Geistlich® Pharma AG). Seventeen implants (9 patients) were randomized into test group and were placed without grafting material. After 10 weeks of healing, implants were functionally loaded with non-splinted single crowns. One year after placement, bone levels were measured on periapical superposable radiographs. The Wilcoxon test was used for statistical significance.

Results: Before loading, two implants (10%) failed in the control group; they were placed in a RBH of 1.4 and 1.2 mm. Two other implants rotated when submitted to 15 Ncm torque (1 test and 1 control); they were placed in RBH of 0.9 mm and 2.3 respectively. These implants were allotted 3 more months of healing before loading. Afterwards, both implants were uneventfully loaded. At the 1-year control, 35 implants (17 test and 18 control) fulfilled survival criteria and gained endo-sinus bone. On the radiographs, peri-implant bone density was higher for the control group implants because of superposition of Bio-Oss® and the newly formed bone. Thirteen implants of the control group (72.2%) were completely embedded in peri-implant bone and were not protruding any more in the sinus; in the test group, 2 implants only (11.8%) were completely embedded. The mean bone gain was 5.0±1.3 mm (range 2.1-7.5 mm) for the control group and 3.9±1.0 mm (range 0.8-6.3 mm) for the test group. The difference in bone gain between the two groups was statistically significant (p=0.006). The difference in crestal bone loss between the 2 groups was not statistically significant (p>0.05); for all implants, the mean crestal bone loss was 0.5±0.7 mm..

Conclusion: This is the first prospective randomized study comparing implants placed by using a OSFE procedure with and without grafting material. No implant failed in the test group and the overall 1-year survival rate was 94.6%. The study confirmed that a grafting material is not required to promote osteogenesis beneath the membrane and gain endo-sinus bone volume. The use of grafting material led to more bone around implants but without grafting material the newly formed bone was sufficient to ensure implant function after 1 year, even in the extremely resorbed maxilla. Failures and events occurred when RBH was < 2.5 mm; they were not related to absence of grafting material.

Acknowledgement: The ITI Foundation is gratefully acknowledged for its support (grant n°428/2005).

Learning objectives:

max. 3

The osteotome technique is functional in very low residual bone height, particularly with TE® SLActive implants.

A grafting material is not required to promote osteogenesis and gain endo-sinus bone volume.

More endo-sinus bone is gained when grafting material is added.

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