

## EFFECT OF NARROW DIAMETER IMPLANTS ON CLINICAL OUTCOME

S. FANALI<sup>1</sup>, M. A. LOPEZ<sup>2</sup>, M. ANDREASI BASSI<sup>2</sup>, L. CONFALONE<sup>2</sup>, I. ZOLLINO<sup>3</sup>, F. CARINCI<sup>3</sup>  
*<sup>1</sup>Department of Oral Science, Nano and Biotechnology, University "G. D'Annunzio", Chieti, Italy, <sup>2</sup>Private practice, Roma, Italy, <sup>3</sup>Department of D.M.C.C.C., Section of Maxillofacial and Plastic Surgery, University of Ferrara, Ferrara, Italy*

**Narrow diameter implants (NDI) (i.e. diameter 3.75 mm) are a potential solution for specific clinical situations such as reduced interradicular bone, thin alveolar crest and replacement of teeth with small cervical diameter. NDI have been available in clinical practice since the nineties but only a few studies have analyzed their clinical outcome. Since no report is available on a new type of implants, a retrospective study was performed. A total of 47 narrow diameter (i.e.  $x \leq 3.40$  mm) two-piece implants (FMD srl, Rome, Italy) were inserted, 35 in females and 12 in males. The median age was  $60 \pm 11$  (min-max 30-80 years). Implants were inserted 22 in the maxilla and 25 in the mandible; they replaced 11 incisors, 3 cuspids, 21 premolars and 12 molars. Implant' length was shorter than 10 mm,  $10.30 \leq x \leq 12.30$ , equal to 13 mm and longer than 13 mm in 17, 28, 1 and 1 fixtures, respectively. Implant' diameter was narrower than 3.5 mm. There were 3, 18 and 26 Elisir, I-fix and Shiner implant types. No implant on single tooth rehabilitations was lost and thus survival rate was 100%. Then peri-implant bone resorption (i.e. delta IAJ) was used to investigate SCR. Seven fixtures have a crestal bone resorption greater than 1.5 mm (SCR = 85.1). Statistical analysis demonstrated that diabetes ( $p=0.044$ ) and smoke ( $p=0.001$ ) have a higher peri-implant crestal bone resorption. In conclusion FMD implants are reliable devices for oral rehabilitation with a very high SCR and SVR although smoker and diabetic patients have a worse clinical outcome.**

*Corresponding author:*

Prof. Francesco Carinci, M.D

Department of D.M.C.C.C Section of Maxillofacial and Plastic Surgery University of Ferrara

Corso Giovecca 203, 44100 Ferrara ITALY

E-mail: [crc@unife.it](mailto:crc@unife.it) Web: [www.carinci.org](http://www.carinci.org)

Phone: +39.0532.455874 Fax: +39.0532.455876

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