

**THE INFLUENCE OF “CONICAL PLUS OCTAGONAL”
INTERNAL CONNECTION ON IMPLANT SURVIVAL AND SUCCESS RATE:
A RETROSPECTIVE STUDY OF 66 FIXTURES**

M. A. LOPEZ¹, M. ANDREASI BASSI¹, L. CONFALONE¹, R. M. GAUDIO²,
L. LOMBARDO³ and D. LAURITANO⁴

¹Private practice, Roma, Italy; ²Department of Medical Sciences, University of Ferrara, Ferrara, Italy; ³Department of Biomedical Sciences and Specialist Surgeries, University of Ferrara, Ferrara, Italy; ⁴Department of Medicine and Surgery, University of Milan-Bicocca, Milan, Italy

Implant oral rehabilitation has become one of the most successful dentistry techniques over the last 30 years. However, peri-implantitis is the most important complication in implant dentistry. Peri-implantitis can be caused by inadequate implant-abutment connections (IAC). The aim of our study is to evaluate the influence of “conical plus octagonal” (i.e. I-Fix connection) on implant survival and success rate. All the implants included in this study were of a completely new type (I-Fix implants and abutments by FMD Falappa Medical Devices S.p.A. Rome, Italy). Sixty-six implants were inserted in males and females. The implants were of different diameters and lengths, inserted both in the mandible and in the maxilla with immediate or delayed loading, with guided bone regeneration (GBR), and post-extractive surgery. All implants were provided with I-Fix connection, 64 abutments using passing screws and 2 using full screws. None of the 66 implants were lost (i.e. survival rate - SVR = 100 %). Cox-regression analysis demonstrated that diabetes (p=0.0074), GBR (p=0.0115), maxilla (p=0.0117) and smoking (p=0.0194) have a statistical significant impact on clinical outcome (i.e. greater bone resorption around implant neck). Our data show that I-Fix connection did not influence SVR. This finding demonstrates that I-Fix design seemed to significantly affect the survival rate of the implants in a recent meta-analysis. In spite of the limits of our study, I-Fix connection has been demonstrated to be efficient in closing the gap between implant and abutment and maintaining a good connection over time.

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