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## Survival and marginal bone loss of dental implants covered by hyaluronic acid: An RCT

Saturnino Marco Lupi<sup>1</sup> and Marco Morra<sup>2</sup> <sup>1</sup>University of Pavia, Italy <sup>2</sup>Nobil Bio Ricerche Srl, Italy

**B** iochemical modification of titanium surfaces can afford dental implants with a faster and safer healing. The working hypothesis B of this Phase I RCT is that implants with traditional surfaces and implants covered by hyaluronic acid are equivalent considering survival rate and marginal bone loss. In this split mouth RCT, patients received implants differing only by implant surface. Two surfaces were tested: the first was a sandblasted and etched titanium surface (control surface, CS); the second was a sandblasted and etched titanium surface covered by hyaluronic acid (test surface, TS). All the patients received TS implants in one side of the mouth and CS implants in the other side. Patients were examined after surgery at 1, 3, 6, 12, 18 and 24 months. Data collected included implant survival, marginal bone level and soft-tissue inflammation. Nobil Bio Ricerche S.r.l, Portacomaro, Italy, provided the implants. The University of Pavia Ethics Committee approved the protocol. Data were analyzed by ANOVA and Bonferroni's post-hoc test. 106 implants were placed in 30 patients. One female patient (two implants) withdrew from the study because of pregnancy. 1 implant in each group failed in achieving osseointegration for infection at 3 months. The final survival rate of each group was 1.96%. Mean marginal bone loss in CS was  $0.63\pm0.51 \text{ mm}, 0.79\pm0.47 \text{ mm}, 0.76\pm0.45 \text{ mm}, 0.75\pm0.55 \text{ mm}$  and  $1.03\pm0 \text{ mm}$  respectively at 3, 6, 12, 18 and 24 months; the same values for TS was  $0.64\pm0.48 \text{ mm}, 0.77\pm0.37 \text{ mm}, 0.83\pm0.40 \text{ mm}, 0.8\pm0.47 \text{ mm}$  and  $0.72\pm0.02 \text{ mm}$ . No significative difference between the two groups was found for any considered parameter. Within the limitations of this study etched and sandblasted titanium implants covered by hyaluronic acid can be considered safe for human use.

## Biography

Saturnino Marco Lupi graduated in Dental Surgery (BDS) (Magna cum laude) at University of Pavia (Italy) in 2005; in 2013 he had his PhD degree in Experimental Surgery and Microsurgery at University of Pavia and in 2015 he got his Master of Dental Surgery (MDS) at University of Milan (Italy). At the School of Dentistry of the University of Pavia, he spent his academic career: in 2011 he became Teaching Assistant, in 2012 Visiting Professor and in 2016 Research Fellow.

saturninomarco.lupi@unipv.it

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