94%

SUCCESS RATE OF PLATFORM SWITCHED IMPLANTS: A RETROSPECTIVE ANALYSIS WITH MARGINAL PERI-IMPLANT BONE LOSS EVALUTATION

UNIVERSITÀ DEGLI STUDI DI MILANO

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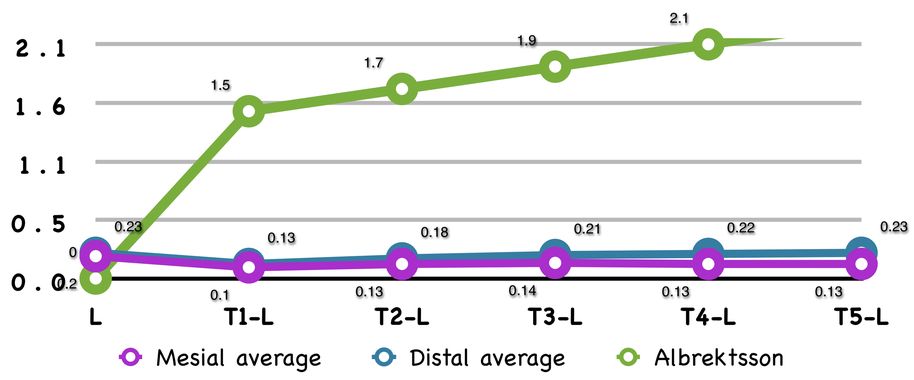
OBJECTIVES

To evaluate the peri-implant marginal bone resorption around platform switched implant fixtures and to define their success and survival rates according to the Albrektsson & Zarb criteria.

MATERIALS AND METHODS

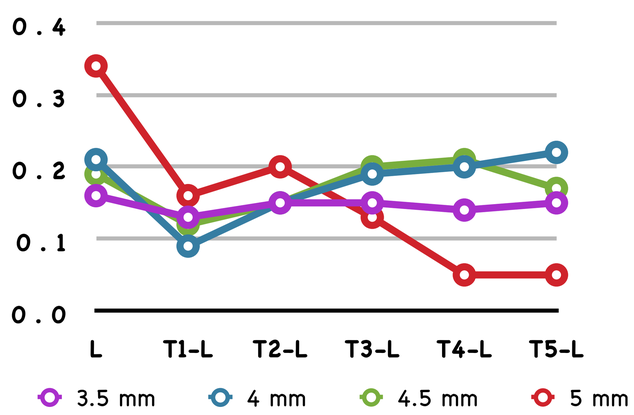
80 patients affected by partial or total edentulism of the upper and/or lower jaw were treated via the placement of 212 platform switched implants (OsseoSpeed®, Astra Tech Implant SystemTM, Dentsply IH S.r.l.). Of these: 175 implants were inserted without any bone regeneration; 14 were inserted in fresh extraction sockets; 6 were inserted after sinus augmentation; 17 were placed concomitantly to a guided bone regeneration. Forty-seven implants were subjected to immediate loading (within 48hours) and 165 to conventional loading (after 3 to 6 months). Marginal bone level changes were evaluated around every implant at 12, 24 and 60 months after prosthetic finalization.

Average Peri-implant bone resorption rate rapported to Albrektsson et al. criteria

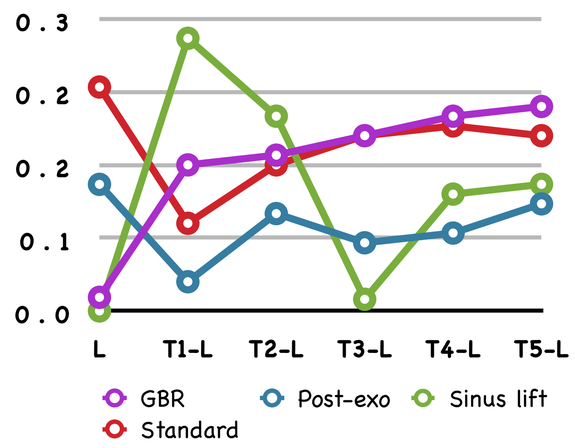


	load	12 months	24 months	36 months	48 months	60 months
Mesial	0,2±0,25	0,10±0,23	0,13±0,27	0,14±0,30	0,13±0,26	0,13±0,33
Distal	0,23±0,35	0,13±0,26	0,18±0,29	0,21±0,34	0,22±0,33	0,23±0,36
Albrektsson	-	1.5	1.7	1.9	2.1	2.3

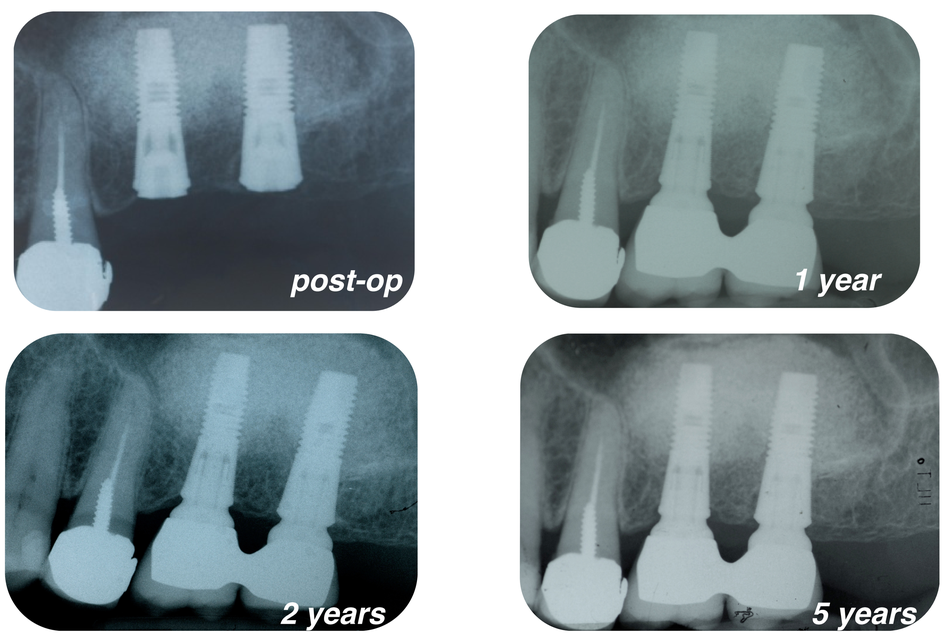
Peri-implant bone level according to implant diameter



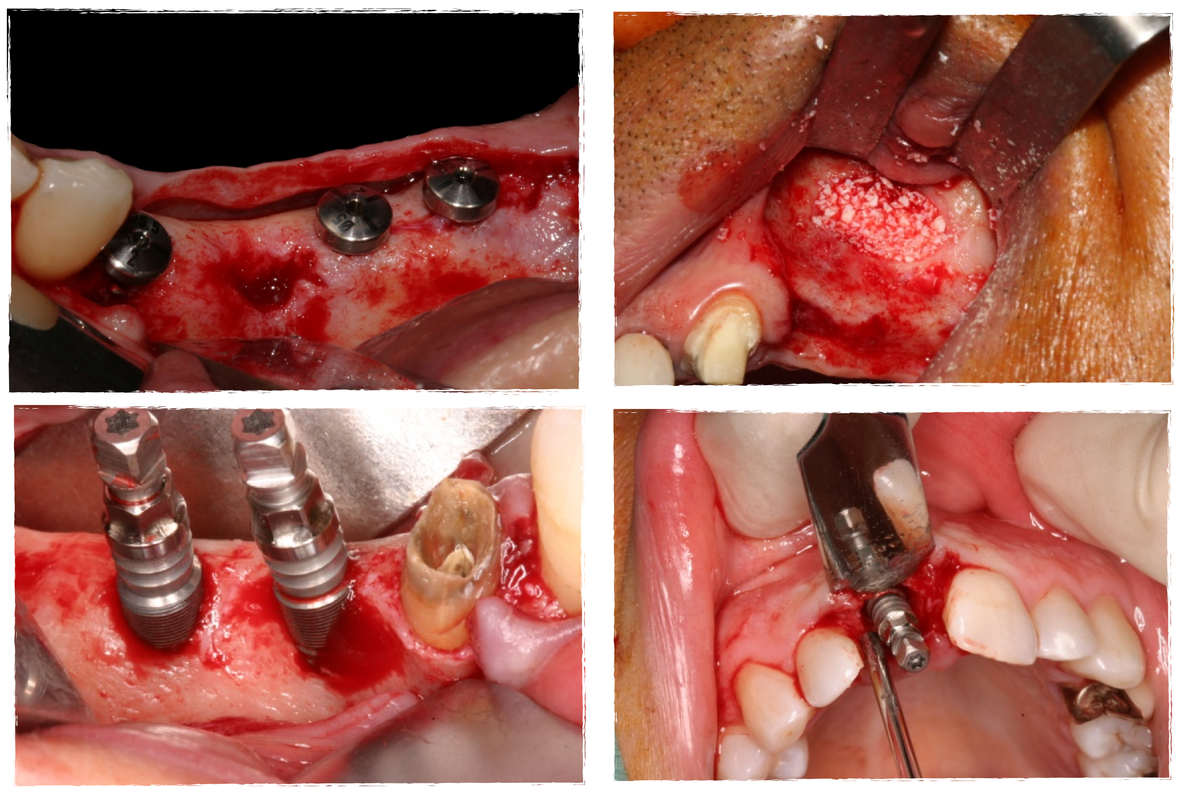
Peri-implant bone level according to protocol



Radiographic followup



Clinical Cases



RESULTS

At each recall, the mean peri-implant bone resorption resulted to be similar in all groups, regardless of the implant dimensions, the edentulous sites, the surgical protocols and the loading times adopted. Specifically, the mean resorption rate varied between 0,10 and 0,13 mm after 12 months, increased of 0,05 - 0,06 mm at 24 months, and of 0,03 - 0,05 mm at 60 months. Only a single implant failed to osteointegrate. At the last recall, 199 implants fulfilled the Albrektsson e Zarb success criteria, while 12 implants survived with significant peri-implant bone resorption. The overall survival and success rates were 99% and 94%, respectively.

CONCLUSION

Results from this study suggest that platform switched implants with a moderately rough blasted surface can provide valuable medium-term outcomes (60 months) in different clinical conditions. In most cases, the observed peri-implant bone resorption resulted to be significantly lower than the threshold set from Albrektsson et al. to define a successful implant rehabilitation.

References

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