99,04%

SUCCESS RATE OF PLATFORM SWITCHED IMPLANTS IMMEDIATELY LOADED WITH MANDIBULAR OVERDENTURES: CLINICAL EVALUATIONS AT A 24 MONTHS FOLLOW-UP

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OBJECTIVES

To evaluate the survival and success rates of platform switched implants immediately loaded with mandibular overdentures.

MATERIALS AND METHODS

From 2005 to 2013, 26 fully edentulous patients were rehabilitated with a total of 101 platform switched implants (Osseospeed®ASTRA and Bone-level®STRAUMANN). All lower arches were rehabilitated through a "U" shaped bar supported by 3 or 4 inter-foramina implants (respectively in 3 an 23 patients) which were immediately loaded after surgery. Standardized periapical and panorex radiographs were performed at the time of implants placement (T0), prosthetic loading (T1), after 6 months (T2) and after 12 months (T3). The peri-implant bone resorption was estimated on the periapical radiographs through an image processing and analysis software (Image J®).

Fig 1. Pre-operative OPT

Fig 2. Pre-operative intra oral view

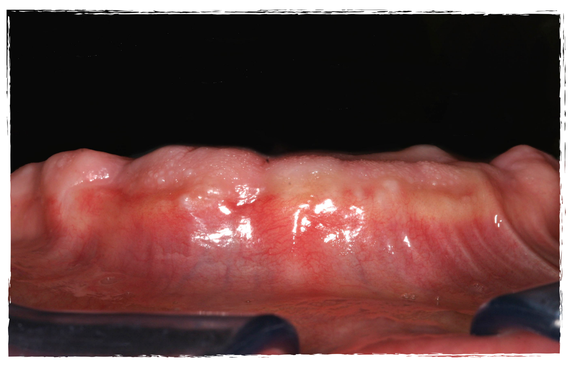


Fig 3. Surgical steps of implants placement

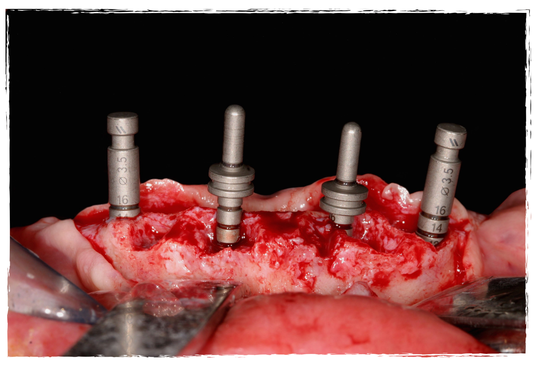


Fig 4. Placement of transmucosal transfer copings

Fig 5. Metal bar placed 48h after surgery

Fig 6. OPT 48h after surgery

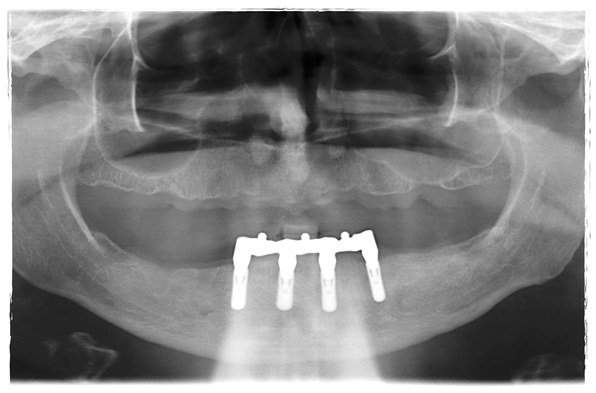
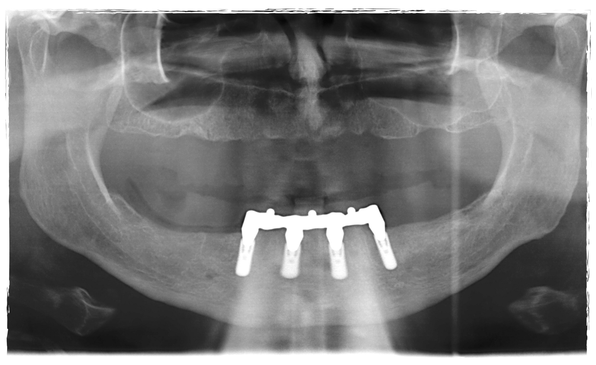


Fig 7. Prosthetic finalization

Fig 8. OPT 1 year after surgery



Patient no.	Sex	Date of implant placement	No.Implants	Implant diameter(mm)	Implant leght(mm)	Failing implants	Type
1	F	January 00	4	3.5	13	0	ASTRA
2	F	January 00	4	4	13	0	ASTRA
3	M	January 01	4	4	15	0	ASTRA
4	M	March 01	4	4	13	0	ASTRA
5	M	March 01	4	4	13	0	ASTRA
6	F	April 01	4	3.5	13	0	ASTRA
7	F	April 01	4	4	13	0	ASTRA
8	F	April 02	4	4	13	0	ASTRA
9	M	June 03	3	4	13	0	ASTRA
10	M	January 04	4	4	13	0	ASTRA
11	M	January 05	3	3.5	13	0	ASTRA
12	M	April 05	4	4	13	0	ASTRA
13	F	April 06	4	3.3	10	0	STRAUMANN
14	F	April 06	4	4	9	0	ASTRA
15	F	May 06	4	3.5	13	0	ASTRA
16	F	May 06	4	4	10	0	STRAUMANN
17	F	March 07	4	3.3	12	0	STRAUMANN
18	F	April 07	4	4-3,5	11 -13	0	ASTRA
19	F	April 07	4	3,5-4	13	0	ASTRA
20	F	December 07	4	3.3	12	0	STRAUMANN
21	M	December 07	4	4	10	1	STRAUMANN
22	F	January 08	3	4	13	0	ASTRA
23	F	February 08	4	3.5	13	0	ASTRA
24	M	April 08	4	4	10	0	STRAUMANN
25	M	May 08	4	4	12	0	STRAUMANN
26	M	November 08	4	4	12	0	STRAUMANN

RESULTS

After a mean follow-up of 72.5 months (range: 25-120 months), the cumulative survival and success rates, according to the criteria proposed by Albrektsson et al. (1986), were respectively 100% and 99.04%. One implant was removed because of a fracture of the screw abutment. These results compare favorably with data reported on standard loading protocols.

CONCLUSION

Results from this case report suggest that immediate loading of mandibular overdentures could represent a reliable alternative to conventional loading, providing a considerable contraction of the overall treatment time required for the prothetic finalization of the case.

References

1. Albrektsson T, Zarb G, Worthington P, Eriksson AR. The long-term efficacy of currently used dental implants: a review and a proposed criteria of success. Int J Oral Maxillofac Implants 1986; 11-25
2. Kern JS, Kern T, Wolfart S, Heussen N.A systematic review and meta-analysis of removable and fixed implant- supported prostheses in edentulous jaws: post-loading implant loss. Clin Oral Implants Res. 2015 Feb 9