

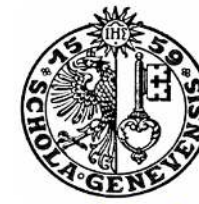


MEMBRE DU SWISS DENTAL CLINICS GROUP

THE ITI SLA IMPLANT IN PRIVATE PRACTICE. RESULTS FROM AN EXPERIENCE WITH 860 IMPLANTS.

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INTRODUCTION

Early loading after 6-8 weeks has been claimed to be predictable with SLA ITI implant in type I-III bone, both in the mandible and the maxilla. These studies have been conducted in university or hospital centers (Rocuzzo et al. 2001, Cochran et al. 2002), involving often predefined

patient selection criteria (Cochran et al. 2002). In private practice, the practitioner wishes to rehabilitate every patient that qualifies prosthetically for implant therapy, without applying strict patient selection criteria. The implant treatment must be cost effective, short in duration, simple in

procedure and highly predictable with reliable esthetics. The present prospective study reports on our 3-year experience with the SLA implant. In addition, it evaluates the applicability and the clinical relevance of early loading in a private practice environment.

MATERIAL & METHODS

Between June 1999 to December 2002, 860 SLA implants were consecutively inserted in 391 patients (mean age 55.3 years), wide inclusion criteria have been applied. 70.8 % of the implants were placed in the posterior area (Fig. 1). Figure 2 shows the bone quality distribution..

Implants ≤ 10 mm were 492 (57.2 %) as shown in figure 3. Most implants were \varnothing 4.1 mm (81.6 %). Implants supported single crowns (29.5 %), short-span 2 to 5-unit bridges (45.7 %), full-arch bridges (5.8 %) and overdentures (19.0 %) as shown in figure 3. Figures 4-6 show some treated cases and

complications. The implant predictability was determined by recording all early and late failures. Any adverse event like pain or implant rotation during abutment tightening at 35 Ncm, was also recorded, especially for the SLA implants submitted to early loading.

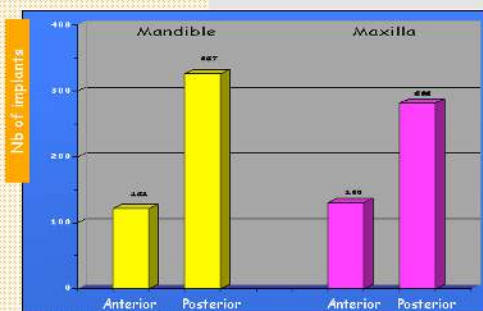


Fig 1 : Implants distribution by quadrant. Most implants rehabilitated the mandible and the posterior region.

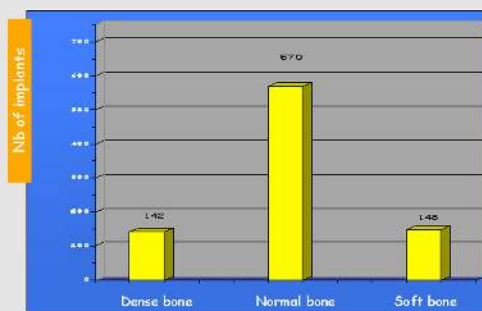


Fig 2 : Distribution of bone quality. 17.2 % of the implants were placed in soft bone quality.

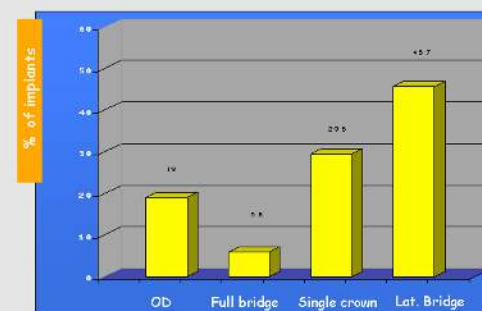


Fig 3 : Distribution of the prostheses. Most rehabilitations were short-span bridges and single crowns.



Fig 4 : Example of an edentulous patient in the maxilla. The patient received 8 implants that supported 4 short-span bridges.



Fig 5 : Examples of most common prosthetic complications. When esthetically acceptable, a composite resin repair was done.



Fig 6 : Example of single tooth edentulism in the maxilla. The final situation after 2 years of function is presented (right).

RESULTS

Out of the 860 placed implants, 114 (13.3 %) implants were immediately loaded (within 1 week), 129 (15.0 %) implants were early loaded (6-8 weeks) and 617 (71.7 %) implants were loaded afterwards as shown in figure 7. The mean healing period in the mandible and in the maxilla was 95 days.

Eleven (1.3 %) implants failed before loading and were early failures, 8 (0.9 %) implants failed after loading and were late failures (fig 8). In the early loading group, 10 (7.75 %) implants rotated at abutment connection when a 35 Ncm torque was applied (fig 9).

A further healing period of 6-8 weeks was allowed to the implants that rotated, they all eventually osseointegrated. The mean observation period was 21 months (min 4 - max 47 months). The cumulative implant survival rate was 97.8 %.

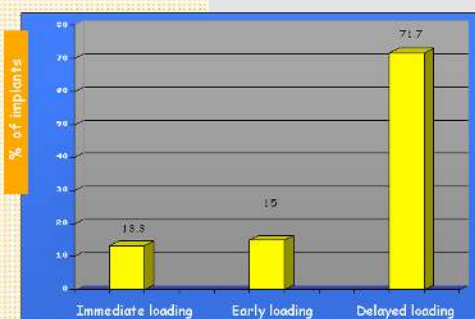


Fig 7 : Distribution of the loading procedures. The early loading advantage was taken for only 15 % of the implants.

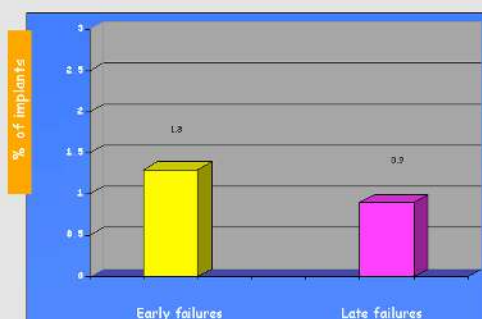


Fig 8 : Distribution of the failures into early and late failures.

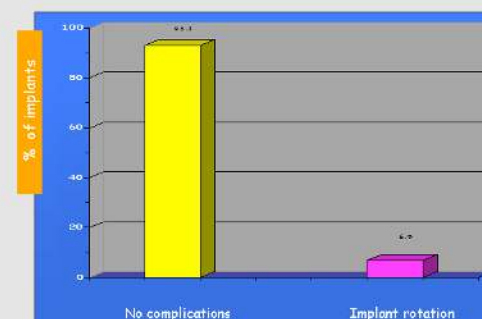


Fig 9 : Complications. 6.9 % of the early loaded implants rotated during abutment tightening at 35 Ncm.

DISCUSSION & CONCLUSION

In our private practice, early loading of SLA implants after 6-8 weeks was as predictable as TPS implants loaded in a traditional way after 3 months. The 3-year cumulative survival rate was 98.7 % while 7.75 % of the early loaded implants rotated. The latter is comparable to the results obtained by other groups that reported a rotation rate of

5.9-6.9 % (Rocuzzo et al. 2001, Morton et al. 2001). Rocuzzo et al. (2001) observed this event peculiarly for short implants placed in the posterior maxilla. This shows that at 6-8 weeks, the healing limit is about to be attained with the SLA surface. Out of 860 implants only 15.0 % were early loaded, the vast majority (71.7 %) were loaded afterwards, despite the

possibility offered to shorten the treatment duration. The early loading advantage had a limited impact in the daily practice and on the patient demand. This shows that, in a private practice environment, it is ultimately the availability of the patient and the practitioner that determines the healing period.