maxillary and mandible.
treatment protocol for the partially edentulous
beneath the critical threshold for implant survival
mandible and eight to ten implants in the

Balshi & Wolfinger 1997; Schnitman et al.
5
of Esthetic Dentistry 10: 280–289.


2001). This shows that this procedure,
progressive approach to immediate loading is therefore recommended, due to the EIC
deployed implant concept.
The literature demonstrated that most failures occur during the first 6 months of function
(Blaske et al. 1999, Balshi et al. 2002). Long-term implant survival rates were also

1996: Schnitman et al. 2000. Several studies have suggested that a future ideal for
implant-based implant restoration is to place implants immediately when used in
immediate-loaded implants when compared to delayed-loaded implants (Chiapasco et al. 1999; MIS
Gossen et al. 2001). Additional studies have shown that MIS implants placed immediately
immediately-loaded implants immediately when compared to delayed-loaded implants (Chiapasco et al. 1999; MIS

1996: Schnitman et al. 2000. The authors demonstrated, with 47 implants placed in six patients followed-up during the
first six months, that the implants supported several different final restorations without any

in mandibles) and eight to ten MIS implants (in maxillae) is a viable alternative treatment
when compared to classical delayed protocols.

In the present prospective clinical study, the step of standard implants with a diameter of 3.75 mm was considered diameter of 4.1 mm. The rationale to choose 4.1 mm instead of 3.75 mm was based on the need for optimum bone-implant contact and load distribution. The pros and cons of using different implant diameters were discussed in a recent study by Leinfelder et al. (2001). This study showed that increasing the implant diameter from 3.75 mm to 4.1 mm results in a significant increase in bone-implant contact and load distribution.

Conclusions
The results of this study support the hypothesis that immediate loading of implants in partially edentulous jaws is a viable alternative to delayed loading. The implants placed immediately in the posterior mandible showed a survival rate of 100% at the end of the follow-up period. The authors concluded that immediate loading can be considered a safe and effective treatment option for patients with partially edentulous jaws.

References
Immediate Implant and Occlusal Loading of 100 MIS SEVEN™ Implants. A Final Report of a Prospective Study.

Troiano Miguel Angel1, Clasas Josef2, Benincasa Mauricio3, Sanchez Patricia4

Abstract

This paper reports the results of a clinical study on immediate implant and occlusal loading using a two-stage technique.

Materials and Methods

Two hundred and two patients were selected in a single center. One hundred implants were inserted in one-stage loaded in the mandible and the maxilla. The patients were classified in 2 groups. The first group contained 100 patients who were treated with single-stage approach as a valid therapeutic alternative and the second group with 100 patients who were treated with immediate loading protocols.

Results

None of the implants failed. At six-month follow-up, bone loss was monitored based on local and periapical radiographs. The final prostheses were inserted and immediately loaded according to an immediate loading protocol.

Objective: This paper reports the results of a prospective study. The study suggests that the rehabilitation of the partially edentulous maxilla and mandible by using MIS SEVEN® implants, according to the classification proposed by Trisi & Rao (1999) as dense (type I) bone, is a realistic approach to the prosthetic treatment of these patients.

Conclusions: The results of this prospective study suggest that the rehabilitation of the partially edentulous maxilla and mandible by using MIS SEVEN® implants is a realistic approach to the prosthetic treatment of these patients. The success rate was 99.7%.

Inclusion and Exclusion Criteria

All patients received MIS SEVEN® implants. The inclusion criteria were: (1) partially edentulous mandible (mandible) and eight to ten MIS implants (maxilla), (2) systemic diseases such as diabetes (all types, regardless of control); (3) infection or paraesthesia; (6) crestal bone loss not assessed by setting the insertion torque of the implant to 35 Ncm.

Table 1. Clinical cases. Placement as prescribed in the literature (Testori et al. 1991; Szmukler-Moncler et al. 1996) as well as the classification proposed by Trisi & Rao (1999) as dense (type I) bone.

Immediate occlusal loading procedures can be successfully used when the amount of micro-motion at the bone-implant interface is kept below a certain limit. Functional loading, and especially occlusal loading of implants, is a procedure that best suited the clinical case.

Table 2. Table 2. Characteristics of immediately loaded MIS® implants.

Table 3. Table 3. Characteristics of immediately loaded MIS® implants.

Figure 1 Preoperative appearance

Figure 2 Placement of 5 MIS implants (SEVEN®) using the surgical guide

Figure 3 Clinical aspects. Occlusal and vestibular view

Figure 4 Implant radiolucency on periapical radiographs

Figure 5 Diagram illustrating the cumulative implant success rate vs time.
Immediate Implant and Occlusal Loading of 100 MIS SEVEN® Implants. A Final Report of a Prospective Study.

Trioarno Miguel Angel, Cecilia Jose, Benincasa Mauricio, Sanchez Patricia.

Material and Methods
Two hundred and ninety-one patients were enrolled in the study. Sixty-five patients were referred by local and regional general practitioners and 126 by local and regional specialists. Twenty-four patients were monitored in the clinic on a regular basis. The study period was from August 2011 to December 2012. Fifty patients were enrolled in the study by the centers of the Instituto Troiano (Argentina).

Inclusion and Exclusion Criteria
Painful implants included in the study according to the classification proposed by Szmukler-Moncler et al. 1997 were treated in six months, if patients were willing to tolerate conventional health-related education in the form of intensified home care. In accordance with the literature, patients were excluded if they had a history of smoking, diabetes mellitus, corticosteroid therapy, or any other systemic illness that would impair the rate of bone healing. The following success criteria were applied to the study: (1) patients were monitored for 12 months post-op. Marginal bone loss was monitored based on local and panoramic radiographs. The results of this prospective clinical study on immediate occlusal loading by five to six MIS implants partially edentulous maxilla and mandible. These new protocols will ultimately lessen the need for multiple interventions and shorten the time frame between implant placement and immediate occlusal loading.

Table 1. Clinical cases.

<table>
<thead>
<tr>
<th>POSITION</th>
<th>CANALS</th>
<th>CONTROL RANGE</th>
<th>PROVISIONAL RESTORATION</th>
<th>FINAL RESTORATION</th>
<th>EXECUTION TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXILLA</td>
<td>4</td>
<td>26/08/2011</td>
<td>ACRYLIC CROWN SPLITTED</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MANDIBLE</td>
<td>8</td>
<td>26/08/2011</td>
<td>LUMINOUS RESTORATION SPLITTED</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2 and 3. Characteristics of immediately loaded SEVEN® implants.

<table>
<thead>
<tr>
<th>LENGTH (mm)</th>
<th>DIAMETER (mm)</th>
<th>TOTAL</th>
<th>SCREWED</th>
<th>HYBRID</th>
<th>RESTORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXILLA</td>
<td>375</td>
<td>35</td>
<td>13</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>MANDIBLE</td>
<td>375</td>
<td>430</td>
<td>62</td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>

Follow-up Procedures
The specific data were recommended to the patients. Three-months follow-up program during the third month was followed by a six-months follow-up program. All implants were clinically stable and met the success criteria. The overall implant success rate was 100%.

Discussion
The ultimate goal of an immediate loading of implants is to reduce treatment time, keep afferent micro-motion at the bone–implant interface within a certain threshold during the healing phase (Szmukler-Moncler et al. 1997; Tarnow et al. 1997; Wöhrle 1998; Balshi & Wolfinger 1997; Schnitman et al. 1990). In an effort to keep the micro-motion at the bone–implant interface within a certain threshold during the healing phase, a number of different clinical studies have been conducted. The design of this prospective study was based on the following criteria: (1) patients were paid in the study; (2) patients were referred by local and regional general practitioners and 126 by local and regional specialists. Twenty-four patients were monitored in the clinic on a regular basis. The study period was from August 2011 to December 2012. Fifty patients were enrolled in the study by the centers of the Instituto Troiano (Argentina).
Immediate Implant and Occlusal Loading of 100 MIS SEVEN® Implants. A Final Report of a Prospective Study.

Troiano Miguel Angel1, Cisass Josè2, Benincasa Mauricio3, Sanchez Patricia4.

Materials and methods: Twelve patients were selected in a monocenter study. One patient was not available at the 1-year evaluation period. Twelve patients were enrolled in the present clinical study and were treated with MIS SEVEN® implants placed in the partially edentulous maxilla and mandible. Implant changes were monitored based on local and panoramic radiographs. Bone loss was monitored according to the classification proposed by Trisi & Rao (1999) as dense (type I) or normal (type II–III) bone quality in the relevant areas. Bone quality was scored according to the classification proposed by Lekholm & Zarb (1985), normal (type II–III) bone quality was scored according to the classification proposed by Szmukler-Moncler et al. (1996) as dense (type I) bone quality or dense-normal (type II) bone quality. The ultimate goal of an immediate loading protocol is to reduce the number of surgical interventions and the time frame between the surgical and the restorative procedures, but without decreasing implant success rates. Immediate implant placement was performed according to a prospective clinical study on immediate implant placement and immediate occlusal loading protocols. The study was performed in one clinical center and evaluated the implant macro-geometry and micro-geometry of both in maxilla and mandible; (2) rehabilitation procedure that best suited the clinical case. The design of the prosthesis was determined by the restorative doctor, as long as the outcome followed the implant manufacturer’s instructions and was carefully monitored. The initial primary stability was assessed by means of the surgical unit and recorded according to the following classification: ‘tight’ when torque was greater than 32 Ncm, ‘firm’ (Testori et al. 2002a). The length of the implants was measured with a torque wrench and an extensometer, and the diameter of the individual implants was measured with a caliper. The length of the implants was measured at each surgical site.

Success Criteria

The following success criteria were applied in the evaluation of each implant: (1) no clinically detectable mobility when tested with opposing force, (2) absence of overt signs of inflammation, (3) no recurrent or persistent peri-implant infections, (4) no component of or partial abutment loss (3) gingival health and gingival index (4) clinical and radiographic evaluation of prosthetic components (5) no loss of crown margin integrity and (6) no loss of crown marginal integrity. The final prosthesis was delivered within 4 hours of the surgical intervention.

Discussion

The survival rate of the implants is kept beneath a certain threshold during the study period. No failures occurred at any time during the follow-up study. The success rate of the implants was 100%.

Follow-up Procedures

For the specific data recommended to the patients, initial patient selection and an initial periodontal disease program during the fixed prosthesis took place every week during the first month.

Oral prophylaxis and a complete radiography were obtained for level assessment at implant insertion in month following.

Success Rate

None of the patients required any surgery during the period of follow-up.

All implants were clinically stable and in the functional condition. The overall implant success rate was 100%.
In this study, the delivery of an immediate prosthesis supported by five to six MIS implants (in mandibles) and eight to ten implants in the maxillae by immediate implant placement was investigated. The authors performed a review and proposed criteria for success. The long-term efficacy of currently used dental implants: a review and proposed criteria for success. International Journal of Oral & Maxillofacial Implants 14: 722–728.


The authors obtained 10-year period results for Bränemark implants. Ten years results for Bränemark implants. Clinical Oral Implants Research 8: 161–172.

The first six months, that the implants supported a provisional restoration. Immediate loading. A retrospective multicenter study on 226 immediate-loaded implants when compared with 2359 implants. Clinical Oral Implants Research 8: 161–172.

Finally, the present preliminary data suggest that six to MIS SEVEN implants in the mandible and eight to ten implants in the maxilla can be placed immediately without additional surgical support in the ridge beneath the clinical crown for improved load control with success even in the same as well tolerated. The study also showed that the delivery of an immediate prosthesis supported by six to eight MIS implants has been determined as a possible treatment protocol for the partially edentulous maxilla and mandible.

Conclusion

Rehabilitation of partially edentulous maxillo-mandibular complex with fixed prosthesis immediately supported by six to eight MIS implants (mandible) and eight to ten MIS implants (maxilla) is a simple treatment protocol when compared to classical step-by-step protocols.

References

The authors demonstrated, with 47 implants placed in six patients followed up during the first six months, that the implants supported several different final restorations without any problems.

In the present prospective clinical study, the use of standard implants with a diameter of 3.5 mm was preferred because of their higher pull-out strength gain of dual-etched titanium implants: a principle (Bone implant contact).

Finally, the present pathologic data suggest that the use of MIS SEVEN® implants in the mandible and in the maxilla in the study group, with a sandblasted and acid-etched surfaces using implants with 2 opposing surfaces. International Journal of Oral & Maxillofacial Implants 1: 11–25.

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