Immediate Loading of Cylinder Screw Implants with Overdentures
in the Mandibular Symphysis: A Revisited Technique

Historically, a strict surgical implant protocol required a stress-free healing period of 3 months for the mandible and 6 months for the maxilla between placement and functional loading of endosseous implants. An initial 2-week period without any removable prosthesis was recommended in edentulous patients. This inconvenient prospect of a long treatment period may preclude some patients from seeking implant treatment. However, such recommendations are a result of evaluating randomly chosen healing times during the initial phase of implant development. The level of predictability and high success of implant therapy in recent years have provided cause to reevaluate both the surgical and prosthetic protocol. In 1979 P.D. Ledermann described a technique of loading 4 rigidly bar-splinted implants in the edentulous mandible. The poster will revisit the approach of immediately loaded cylinder implants by a u-shaped bar in the edentulous mandible. Four grit-blasted and acid-etched screw implants (FRIALOC®, FRIADENT GmbH, Mannheim) are placed in the interforaminal area of the mental symphysis. Immediately after implant placement, an impression is made for the fabrication of a mesio-bar superstructure. The implants are loaded as early as one day after surgery with an implant-retained overdenture. It will be demonstrated that osseointegration can be achieved with a high level of predictability if the technique is properly applied. The approach of bar-prosthetic immediate loading will be presented and discussed on the basis of clinical and statistical data. The surgical and prosthetic management of mandibular implant-supported overdenture cases may be greatly simplified with the use of this technique in a selected group of patients. Dental rehabilitation time is shortened with relevant satisfaction for patients and improved function immediately after implant placement.

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Requirements on bone volume

<table>
<thead>
<tr>
<th>Year</th>
<th>Patients</th>
<th>Average 2nd-stage / 3rd-stage (Yrs)</th>
<th>% Implant success rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>1739</td>
<td>5.28</td>
<td>94%</td>
</tr>
<tr>
<td>1996</td>
<td>1523</td>
<td>7.23</td>
<td>93%</td>
</tr>
<tr>
<td>1997</td>
<td>904</td>
<td>6.4</td>
<td>97%</td>
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</tbody>
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Conclusions:
- Rapid implant-prosthetic rehabilitation
- Cost & time effective treatment
- Minimal surgery
- High patient acceptance
- Proven protocol

Requirements on bone volume

- Minimum 4 implants
- Minimum 10 mm implant length
- Absolute primary stability of implants must be achieved at time of insertion.
- If not, the case should be treated in two stages
- Rigid splinting of the implants to avoid macro-movement
- Triangular distribution of the implants ("Cross-arch" stabilization)
- A + implant spread as wide as possible to avoid rotation

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Immediate loading of 4 rigidly bar-splinted FRIALOC® Implants

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<thead>
<tr>
<th>Immediate loading of 4 rigidly bar-splinted FRIALOC® Implants</th>
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<td>2 weeks</td>
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