International Poster Journal IPJ of Dentistry and Oral Medicine

Int Poster J Dent Oral Med 2001, Vol 3 No 2, Poster 76

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

Language: English

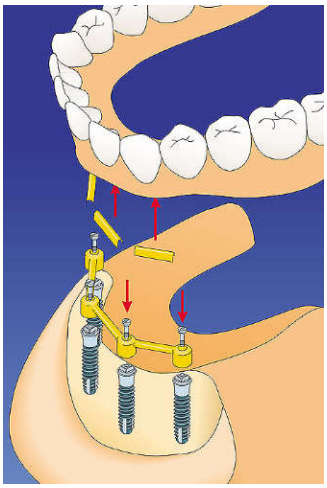
Author(s): Peter Gehrke (1), Jörg Neugebauer[1], Paul-Joachim Becker[2], Klaus Udo Lotzkat[3], Georg Bayer[4], Günter Dhom[5], Ady Palti[6], Peter Brabant[7], Stephen Wallace[8]
[1]FRIADENT GmbH Mannheim/Germany; Private Practice: [2]Neunkirchen, [3]Hannover, [4]Landsberg, [5]Ludwigshafen, [6]Kraichtal/Germany; Private Practice: [7]Waregen/Belgium, [8]New York/USA

Date/Event/Venue:
April 16-17, 1999
EAO
Copenhagen

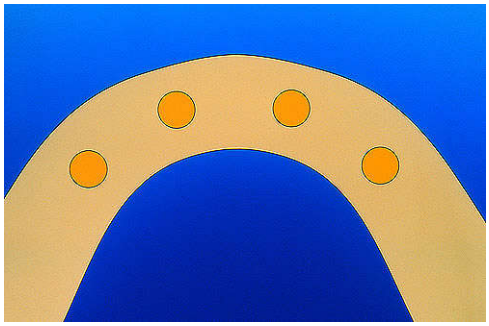
Introduction

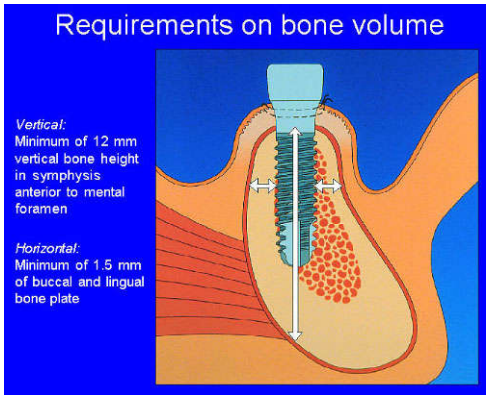
Historically, a strict surgical implant protocol required a stress free healing period of 3 months for the mandible and 6 months for the maxilla between placement and functional loading of endosseous implants. An initial 2-week period without any removable prosthesis was recommended in edentulous patients. 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.

Concept

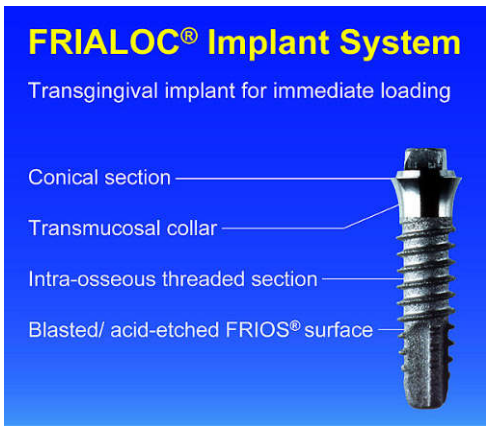


- Minimum 4 implants
- Minimum 10 mm implant length
- Absolute primary stability of implants must be achieved at time of insertion.
  -> If not, the case should be treated in two stages
- Rigid splinting of the implants to avoid macro-movement
- Triangular distribution of the implants
  ("Cross-arch"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

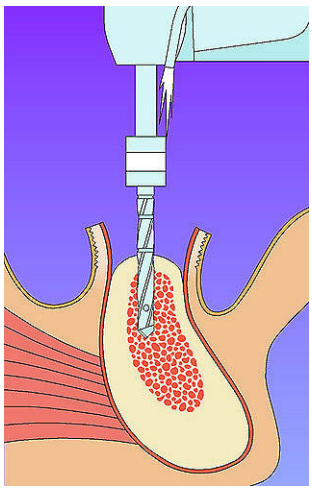




Armamentarium

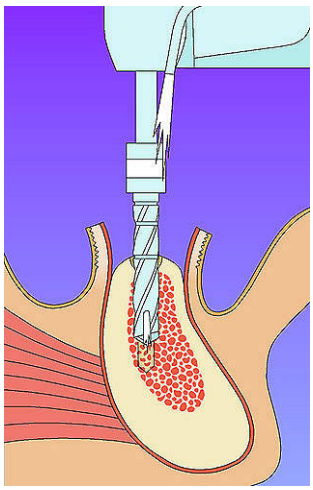


Pilot drill



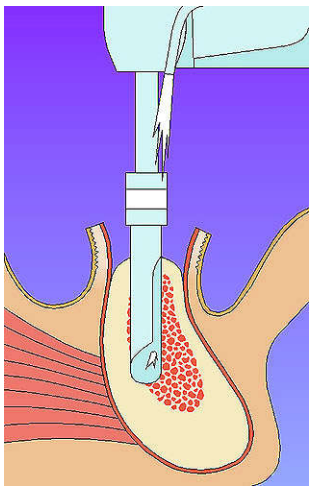
Initial pilot preparation

Drill D3.0



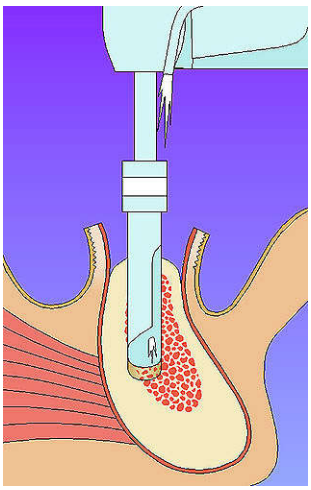
Final prep. in bone DII-III for D3.5 implants

Drill D3.3



Final prep. in bone DII-III for D4.0 implants
Dense bone: enlargement of receptor side for D3.5 implants

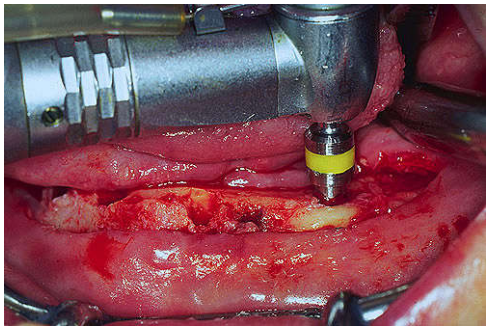
Drill D3.6

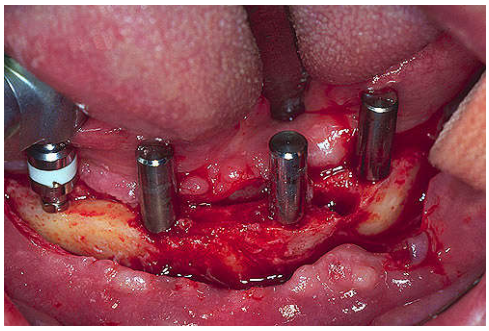
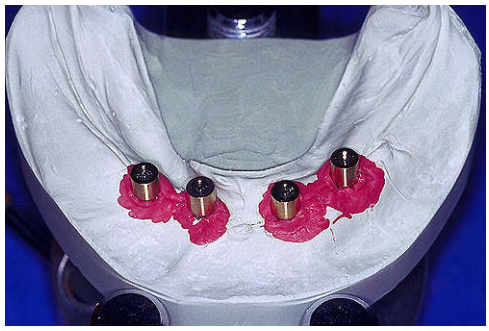
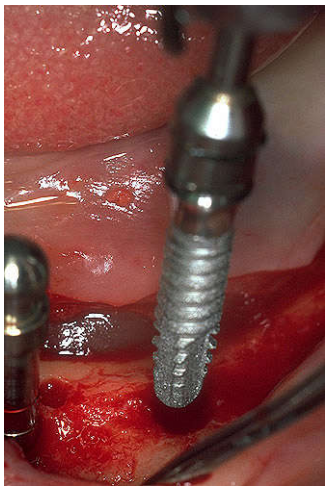
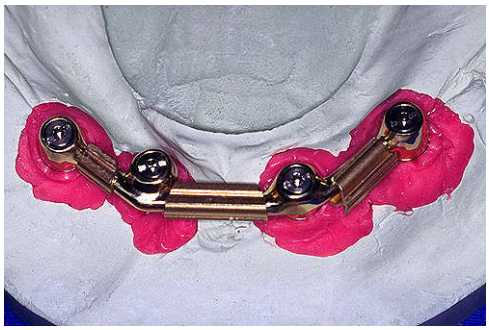
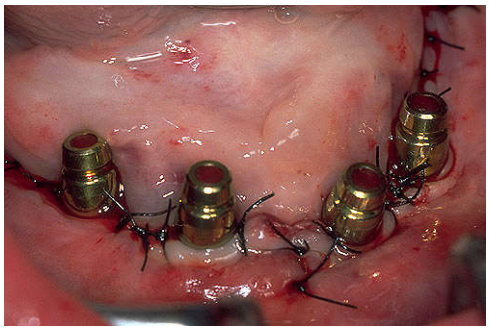
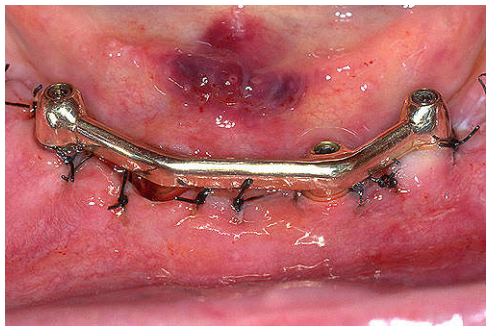


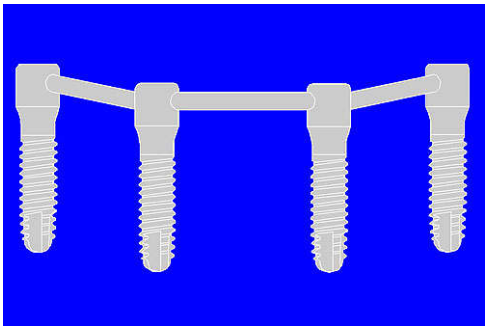
Final prep. in bone DI or D4.0 implants

	1986 Babbush et al.	1996 Ledermann	1997 Chiapasco et al.
Implants	1739	1523	904
Patients	484	411	226
Average follow-up (Years)	2.86	7.23	6.4
Implant success rate	94%	93%	97%

Clinic





Conclusion

- **Rapid implant-prosthetic rehabilitation**
- **Cost & time effective treatment**
- **Minimal surgery**
- **High patient acceptance**
- **Proven protocol**

Bibliography

1. Ledermann PD: The bar-type rehabilitation on Titanium plasma-sprayed screw implants in the edentulous mandible. Article in German. Dtsch Zahnärztl Z, 1979,34, 907-911
2. Ledermann PD: The New Ledermann Screw. Article in German. Die Quintessenz 5/1988;1-17.
3. Ledermann PD: The immediate implant-bar in the edentulous mandible. More than 20 years of experience. Article in German. Swiss Dent 17 (1996), Vol.4,5-18
4. Babbush CA et al: Titanium plasma-sprayed screw implants for the reconstruction of the edentulous mandible. J Oral Maxillofac Surg 1986; 44:274-282
5. Chiapasco M et al: Implant-retained mandibular overdentures with immediate loading. A retrospective multicenter study on 226 consecutive cases. Clin Oral Implants Res 1997; 8(1):48-57

This Poster was submitted on 14.05.01 by Dr. Peter Gehrke, FRIADENT GmbH, Mannheim.

Correspondence address:
Dr. Peter Gehrke, FRIADENT GmbH, Mannheim
FRIADENT GmbH
Steinzeugstraße 50
68229 Mannheim

Poster Faksimile: