Fig. 13  Case 3 - The implant in position 3.3 was lost because of residual infection and replaced by a 3mm L 13mm UNO implant after 2 months. During this period the other implants received a resin provisional restoration. 2X 4, 2mm L 6.

Fig. 14  Case 3

Fig. 15 Case 3

Fig. 16

Case 3 - Intraoral x-ray at 6 months after bridge fixation. See the direction of the mandibular nerve.
The Use Of 6mm Long Implants In Cases With Limited Bone Height: A Preliminary 6-Month Clinical Study

Olimpiu Lăzaranci, Radu Sîta, Emanuel A. Bratu

Background
Limited bone height dictates the use of standard length implants. Short implants have been widely used for about two decades, but evidence concerning their predictability for lengthy and expensive augmentation procedures is lacking. Short implants may support prosthetic constructions adequate to fulfill clinical expectations regarding esthetics. The purpose of this study is to evaluate the clinical behavior of short implants in reduced bone conditions. The hypothesis was: “Short implants in atrophied jaws are able to result in similar long-term survival rates compared with standard implants. Short implants seem to be the optimal option as at least for 6 months after loading. Short implants are a viable solution for the use of supplementary implants in free end situations, especially when used in type III or IV bone that is often found in the maxilla. Bone remodeling results of these short implants were favorable, as stand-alone implants, there are sufficient arguments in favor of implant mechanical arguments in favor of implant mechanical considerations.”

Materials And Method
Study was approved by PIB (preliminary). Subjects - Twenty three implants were placed in 11 patients in different clinical situations. All patients were healthy with good oral hygiene, but smoking was not an exclusion criterion. Twenty three 6mm implants (Seven, MIS Implants, Bar-Lev, Israel) diameter 4, 2mm, were inserted using the drill provided with each implant. Implants were inserted using the hand piece of a turbine. Final flaps were raised to extract the teeth. After 3 months of subgingival healing the implants were sealed with fixed partial dentures. All 6 mm implants presented smaller probing depths compared to each other. None of the implants were immediately loaded. The implants were followed-up for 6 months after insertion for the maxillary implants.

Surgical Protocol
Within the limitations of this preliminary study, it can be concluded that short implants are a viable solution for the use of supplementary implants in free end situations, especially when used in type III or IV bone that is often found in the maxilla. Bone remodeling results of these short implants were favorable, as stand-alone implants, there are sufficient arguments in favor of implant mechanical considerations. Further investigations into clinical and biomechanical studies concerning this short implant technique would be needed.

Results
All implants showed good primary stability at placement. Fixation was lost during healing period. Prior to loading, all implants were checked for periimplant marginal bone loss. Bone loss as measured on panoramic x-ray was no more than 1 mm for all implants. None of the implants had negative periotest results. None of the implants were immediately loaded. engine bearing. All implants inserted were splined together and fixed with a metal bar. Implants were screwed to the implants and in the middle of the arches fixation at the root level was achieved with the drill provided with each implant. Implants were inserted using the hand piece of a turbine. Final flaps were raised to extract the teeth. After 3 months of subgingival healing the implants were sealed with fixed partial dentures. All 6 mm implants presented smaller probing depths compared to each other. None of the implants were immediately loaded. The implants were followed-up for 6 months after insertion for the maxillary implants.

Conclusion
Within the limitations of the preliminary case report, it can be concluded that short implants are a viable solution for the use of supplementary implants in free end situations, especially when used in type III or IV bone that is often found in the maxilla. Bone remodeling results of these short implants were favorable, as stand-alone implants, there are sufficient arguments in favor of implant mechanical considerations.
Clinical case presentation:

Case 1

Clinical case presentation: Case 2

Clinical case presentation: Case 3

Results

All implants showed good primary stability at placement. Fixation was lost during the healing period. Prior to loading, all implanted fixtures received periapical radiographs. None of the initially placed implants were lost during the healing period. In addition, bone loss measured 1 mm per implant, with many implants maintaining their primary stability. Bone loss as measured at the implant fixtures was no more than 1 mm during the healing period. None of the investigated implants was lost after 6 months of loading. All implants showed good primary stability at placement. Fixation was lost during the healing period. At this point in time and although the clinical results obtained at a follow-up period of 6 months are promising, it is recommended that short implants are used in combination with longer implants, or other treatment modalities such as bone augmentation or bone grafting. With the available evidence, it is recommended that short implants are not used as stand-alone implants, as there is sufficient evidence in favor of implant mechanical stability. Further investigations are needed to establish the clinical behavior of these implants in different clinical situations.

Conclusions

Within the limitations of the present study, it can be concluded that short implants may be used in combination with longer implants, or other treatment modalities such as bone augmentation or bone grafting. With the available evidence, it is recommended that short implants are not used as stand-alone implants, as there is sufficient evidence in favor of implant mechanical stability. Further investigations are needed to establish the clinical behavior of these implants in different clinical situations.
The Use Of 6mm Long Implants In Cases With Limited Bone Height: A Preliminary 6-Month Clinical Study

Olimpiu L.Karanică | Radu Sita | Emanuel A. Bratu

Background
Limited bone height limits the use of standard length implants. Short implants have been used in such situations. However, the need for augmented bone is often not acceptable for lengthy and expensive augmentation procedures. In these cases, short implants may augment paradontal conditions adequately, but still clinical documentation is sparse. The purpose of this study was to determine the performance of short implants in reduced bone conditions. The hypothesis was: “Short implants or augmented jaws are able to result in similar long-term success rates compared with standard implants.”

Materials And Methods
Study was approved by NIH (protocols). Patients: Twenty-three 6mm implants (Seven, MIS Implants, Bar-Lev, Israel) diameter 4, 2mm, length 6mm were placed. All patients were healthy and with good oral care. Medication included analgesics (Ketonal forte 200mg) for 3 days. 1gr Smithkline Beecham) for 6 days and antibiotics (Augmentin, 1.5g, 2times/day for 6 days). Implants were splinted when necessary.

Results
All implants showed primary stability at placement. The implants were lost during healing period. Prior to loading, all implants had negative periotest and Ostell measurements. In addition, bone loss was measured. In the mandible, bone loss was measured at 6 months of subgingival healing. No implant was lost during the healing period. Prior to loading, all implants were splinted. All implants were loaded with fixed partial dentures. All 6 mm implants seem to be the optimal option as least for 6 months after loading. Short implants allow for improved maintenance of the mental foramen.

Conclusion
Within the limitations of this preliminary study, it can be concluded that short implants are useful for cases with limited bone height. The implants were lost due to high load and clinical overload. Further investigation is needed in order to recommend the use of these implants.
The Use of 6mm Long Implants in Cases With Limited Bone Height: A Preliminary 6-Month Clinical Study

Fig. 11  Case 3 - Panoramic x-ray after insertion.

Fig. 12  Case 3 - Intraoral x-ray at 6 months after bridge fixation. See the direction of the mandibular nerve.

Fig. 13  Case 3 - The implant in position 3.3 was lost because of residual infection and replaced by a 3mm l 13mm UNO implant after 2 months. During this period the other implants received a resin provisional restoration 2X 4, 2mm L6.
The Use Of 6mm Long Implants In Cases With Limited Bone Height: A Preliminary 6-Month Clinical Study

Fig. 12  Case 3 - Panoramic x-ray after insertion.

Fig. 13  Case 3 - The implant in position 3.3 was lost due to residual infection and replaced by a 3mm L13mm UNO implant after 2 months. During this period, the other implants received a resin provisional restoration: 2X 4, 2mm L6.

Fig. 14  Case 3

Fig. 15 Case 3

Fig. 16 Case 3 - Intraoral x-ray at 6 months after bridge fixation. See the direction of the mandibular nerve.