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CASE REPORT:
DENTAL IMPLANTS IN PERIODONTALLY INVOLVED BONE AREAS:
THE TECHNOLOGY OF THE STRATEGIC IMPLANT®
RADICALLY CHANGES TREATMENT POSSIBILITIES.

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Contact

publishing@implantfoundation.org

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Dental implants in periodontally involved bone areas: the Technology of the Strategic Implant® radically changes treatment possibilities

Authors

Prof. Dr. Stefan Ihde
Evidence and Research Dept.,
International Implant Foundation, Munich,
Germany
Email: ihde1962@gmail.com

Abstract

If the Technology of the Strategic Implant® is applied, bone augmentations and healing times are not part of the treatment plan for implants any more. As this article shows, bone addition, sinus lift, waiting time are not necessary for implant treatment and for patients to receive fixed teeth as long as cortically anchored implant designs with polished endosseous surfaces are used. As well periodontally involved soft tissues are not an obstacle in immediate implant treatment with Strategic Implant®.

Key words

Immediate functional loading, Strategic Implant®, sinus-lift, periodontally involved soft tissues, bone healing.

How to cite this article

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Introduction

In the field of conventional dental implantology, the treatment of periodontal infections must be done before conventional dental implants can be placed. This leads to the paradox situation that either periodontal treatment must be done before implant placement, or all teeth must be removed considerably earlier before implant placement and an intermediate prosthesis is then delivered. This prolongs the overall treatment time and increases the costs. Both preconditions reduce the chance that the patient will opt for implants.

Recent studies have shown that the Technology of the Strategic Implant[®] not only does not lead to Periimplantitis, but also allows a fast approach in periodontally involved cases¹, "Teeth and periodontally involved parts of the gums are removed immediately before implants are placed, and subsequently an immediate loading protocol is carried through.

In this article we would like to show the possibilities of the Technology of the Strategic Implant[®] and the differences between conventional dental implants on three clinical cases.

Material and Methods

Case 1

A 54 year old male patient, smoker, requested an overall treatment of his jaw condition. The treatment provider recommended removal of all teeth due to the periodontal involvement, mobilities, recurrent infections and reduced lifespan, Fig. 1. We informed the patient also that repairs on various single teeth will not improve the masticatory possibilities at all.

At the same appointment when all teeth were extracted, all implants were placed (10 cortically anchored implants in the upper jaw, 8 cortically anchored implants in the lower jaw). Uneventful healing is seen on the panoramic picture which was taken during a 3-month-control, as well as during a 7-year-control, Fig. 2 and 3.



Fig. 1 Pre-operative panoramic picture showing generalized periodontal disease and bone loss at all teeth and deep endoparodontal lesions at a number of teeth.

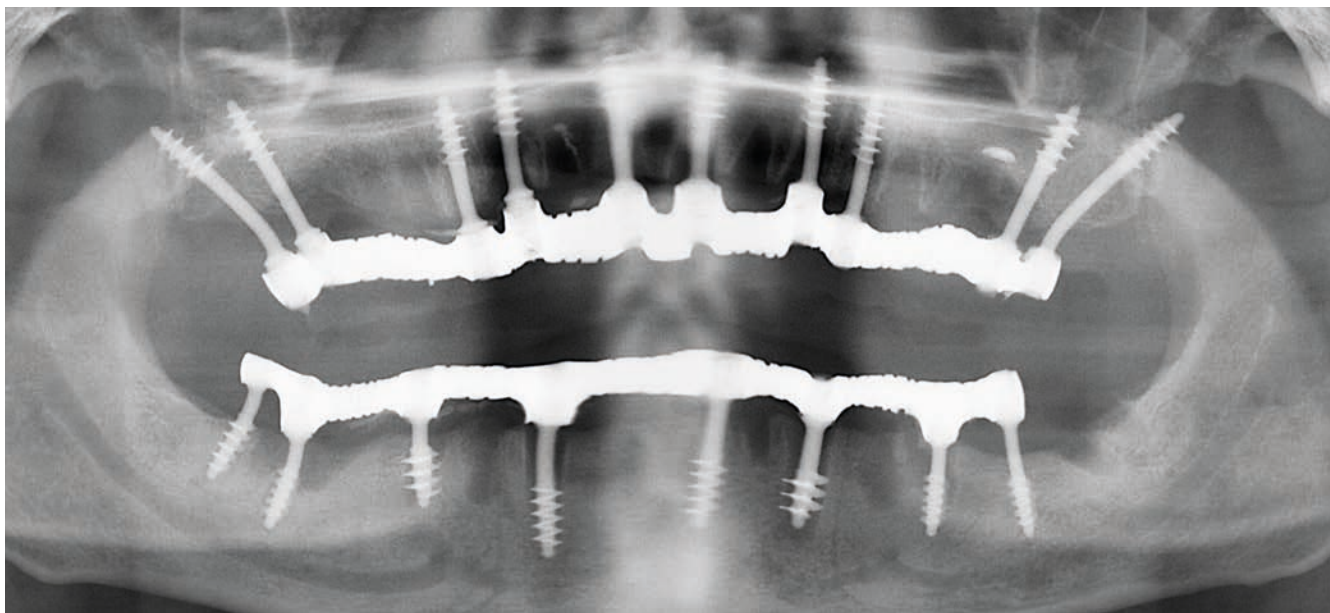


Fig. 2 The 3-month post-operative panoramic picture shows that all teeth were extracted and some of the implants were placed in the extraction sockets (e.g. in area 47, 25, u.a.) and others in healed bone areas.

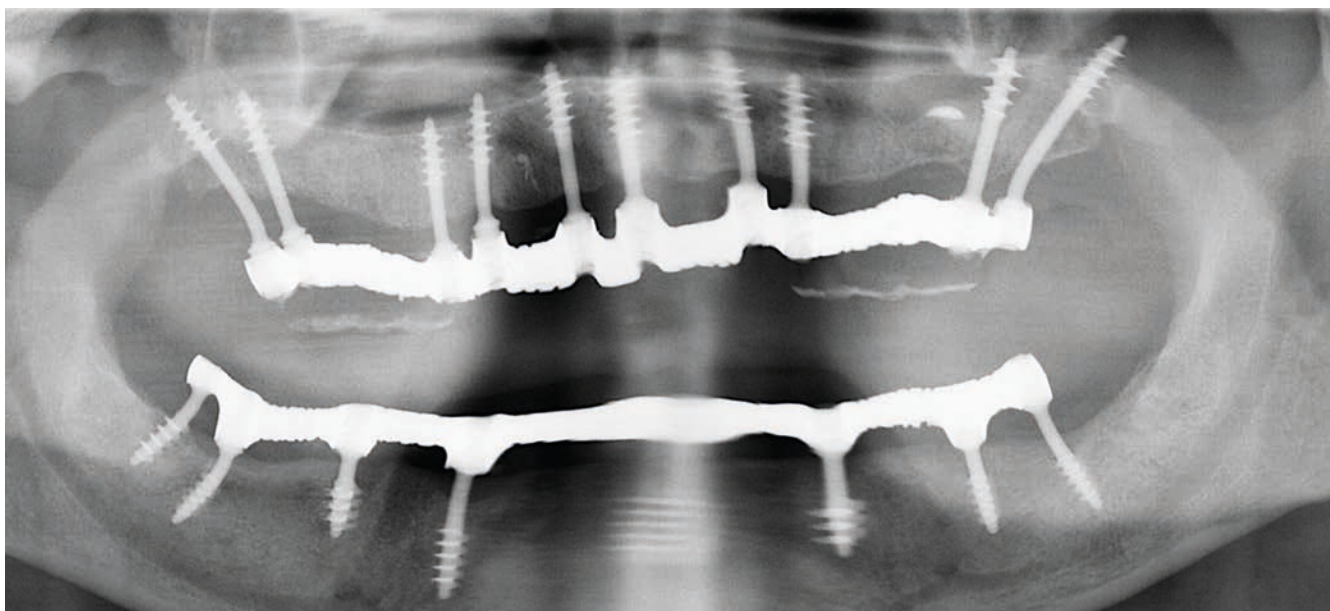


Fig. 3 The 7-year post-operative panoramic picture shows uneventful healing, absence of infections, formation of a continuous bone line, no crater-like bone-loss, and that all pre-existing bone craters have re-filled independently from the implant placement. The implant 47 which was placed deep into a periodontally involved site (into the 2nd cortical) is now surrounded by healthy bone.

Case 2

A 53 year old male patient, smoker, requested the restauration of both jaws with bridges on implants in an immediate loading procedure. The pre-operative picture (Fig. 4) revealed deep pockets, elongations and generalized bone loss. All teeth were extracted and replaced by implants, using the Technology of the Strategic Implant[®], Fig. 5.

Three months later during the 2nd clinical and radiological control the bone sites appeared to heal uneventfully (Fig. 6 and 7). For better visibility the figures show only details on the areas described here.



Fig. 4 Section of the pre-operative panoramic pictures showing left lower jaw of the patient. 34 and 36 is missing, 35 had moved distally. 37 shows profound periodontal involvement on the distal root. 33 shows a large translucency in the area of the root, resembling a peri-apical infection.

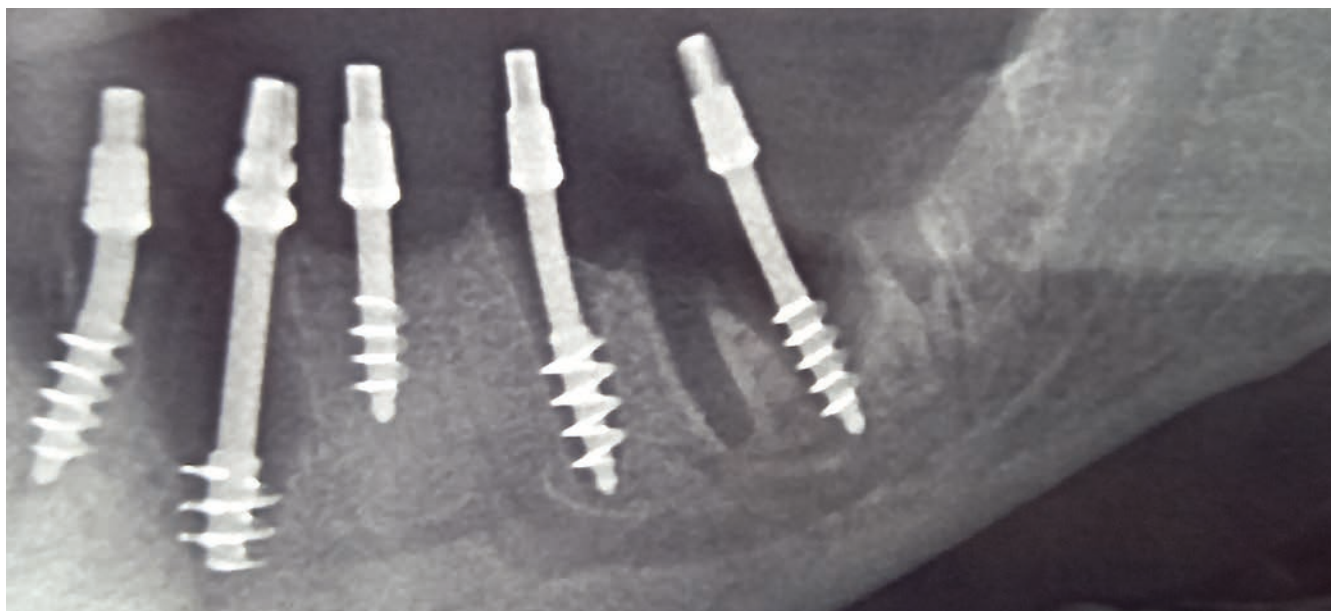


Fig. 5 Postoperative section of the panoramic picture, showing the lower left mandible. One Strategic Implant[®] has been placed into the deepest section of the periodontal defect of the distal root of tooth 37. No implant was placed in area 38. A wide diameter implant (BCS 4.6 23) had been placed partly apically to the peri-apical infection of tooth 33.

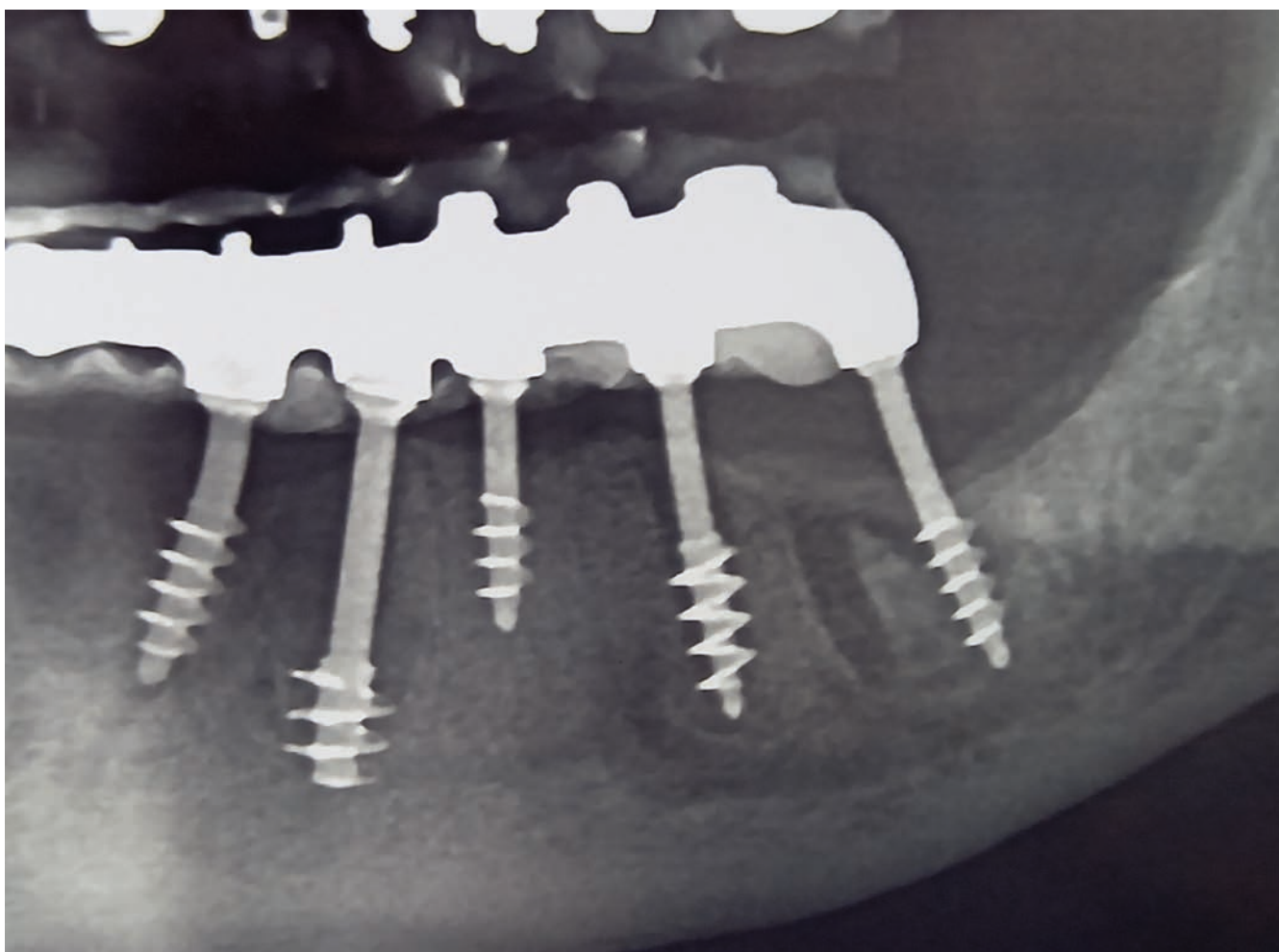


Fig. 6 During the 3-month control this picture was taken: All defects in the bone heal uneventfully and have started to mineralize.

Case 3

The patient shown in Case 3 was 60 years old and he had profound periodontal involvement, partially with pockets reaching to the apex of the teeth. All teeth incl. a retented tooth 48 were removed and in the same treatment implants in the up-

per and lower for circular bridges were placed.

Two years later the implant sited appeared uneventfully and new bone had grown vertically upwards along the implants.

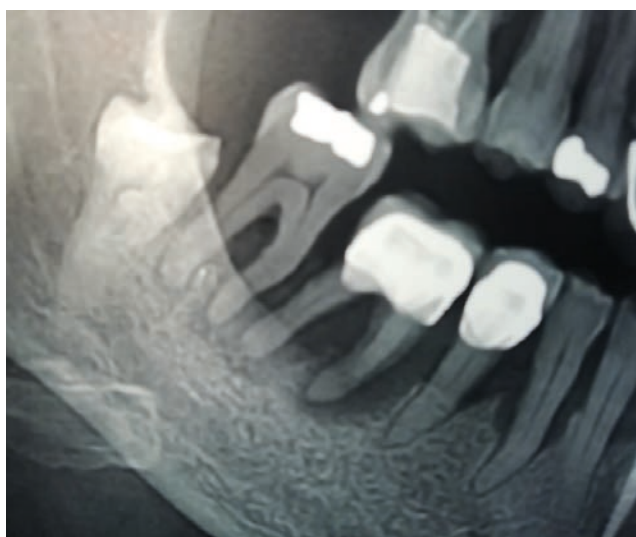


Fig. 7 Panoramic view on the lower right segment of the mandible with a retentive tooth 48, and teeth 47, 46, 45 with profound periodontal involvement. Also tooth 44 is showing advanced bone loss.

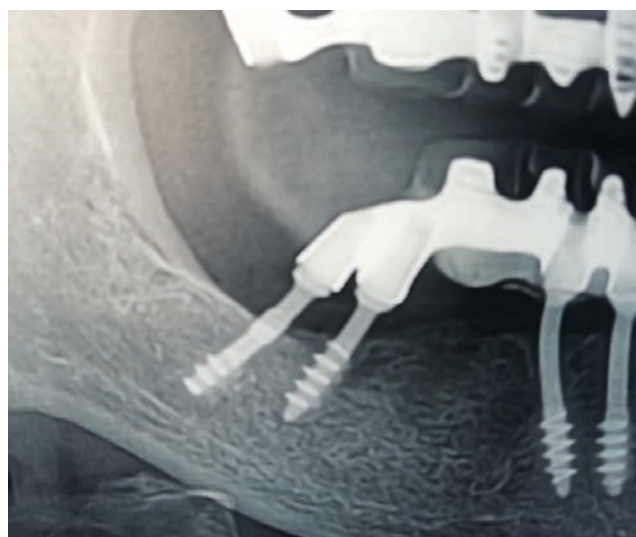


Fig. 9 After two years a new crestal bone line in the lower left mandible has developed and the former extraction sockets and pockets have almost levelled out.



Fig. 8

Results

In all cases shown here we can observe the same pattern of healing around the Strategic Implant[®]: While the implant is anchored in the 2nd cortical, the crestal defects heal (in the sense of a re-formation of bone in extraction sockets or increase of mineralization of bone in the area of apical granulation) the same way as if no implants were placed into them. A new crestal bone-line forms in an adequate height. Likewise the total bone volume will adjust according to Wolff's law^{III} and there are no influences nor bone loss due to Periimplantitis expected.

Discussion

Conventional dental implants carry massive design-derived disadvantages with them, which make simple treatments as shown in the before mentioned cases absolutely impossible. The major disadvantages of conventional 2-stage implants are: Their rough surface lead inevitably to bone loss along the vertical axis of the implant and often Periimplantitis begins after 2-3 years. Their large diameters allow placement only in selected bone areas, and their 2-piece design (implant + abutment) allow mobility between the components and thereby submucosal bacterial leakage. These are three prominent reasons for Periimplantitis. Although these disadvantages are known in the profession, the conventional (2-stage) designs are still frequently used and alternatives are either unknown to, or neglected by many practitioners.

The cases shown here are “hard to believe” or to understand for followers of 2-stage-concept, because such cases conflict with all prevailing assumptions. In the 2-stage world there is close to always bone loss along the vertical axis of the implants, whereas specialists trained in the Technology of the Strategic Implant® suddenly make bone grow in crestal direction along the vertical axis of the implant.

In the field of conventional dental implantology, right after implant placement, the best situation and spatial relationship between the implant and the bone is arranged. From then on the patients situation gets only worse and worse, until the 2-stage implant is finally failing. The users of these 2-stage implants have accepted this situation and they accompany their patients on the road downhill without being able to help them.

In contrary when the Technology of the Strategic Implant® is used, the crestal bone level is allowed to arrange itself through function derived stimuli, and neither Periimplantitis nor peri-apical infections will deteriorate the situation. The amount of jaw bone is self-adjusting and in extraction cases bone tends to grow vertically up along the polished shaft of the implant, towards the bone's crest.

For 2-stage implantologists not only intense new learning is required but forgetting the old rules and modalities of implantology. The Technology of the Strategic Implant® is not only a little bit different for conventional implantology, it is a completely new science^{IV}.

In 2019 the International Implant Foundation (Munich/Germany) has published a consensus on Corticobasal® Treatment

Modalities. Since then the dental profession has to accept that there are two completely different “Implantologies” available.

In the world of 2-stage-implantology, all systems are more or less the same and show only minimal differences in implant design. All those implants, regardless of the brand, have so many shortcomings and disadvantages in common, that their use should be stopped.

After the Technology of the Strategic Implant® has been made available to our profession, all these disadvantages are not acceptable any more.

The answers how patients are treated with oral implants have changed.

Conclusion

The Technology of the Strategic Implant® overcomes major disadvantage of conventional implantology:

- Implants may be placed immediately after extraction of teeth and even in situations where peri-apical or periodontal infections are present in the masticatory system.
- Treatments are as a rule performed in an immediate functional loading protocol.

- The Technology of the Strategic Implant® utilizes only native natural bone for the implants fixation and hence bone augmentations in general and sinus-lift-procedures are unnecessary.

- I Pałka Ł, Lazarov A. Immediately loaded bicortical implants inserted in fresh extraction and healed sites in patients with and without a history of periodontal disease. Ann Maxillofac Surg 2019;9:371-8
- II Lazarov A. Immediate functional loading: Results for the concept of the Strategic Implant®. Ann Maxillofac Surg 2019;9:78-88
- III Wolff J (1892): Das Gesetz der Transformation der Knochen. Verlag Aug. V Hirschwald, Berlin.
- IV <https://www.implantfoundation.org/en/konsensuspapier-zur-sofortbelastung-von-kieferimplantaten-en>



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