

IMAGISTIC EVALUATION OF THE ENDOBONE DENTAL IMPLANTS INSERTED IMMEDIATELY AFTER THE EXTRACTION INTO A DENTAL ALVEOLUS WITH CHRONIC INFECTIOUS PROCESSES

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Abstract: By advantages of immediate postextractional implant, we are referring to the conservation of the bone matter and the shortening of the treatments duration. This technique is recommended in situations that fulfill certain conditions. Some conditions are: the integrity of the alveolar walls, the lack of inflammatory and bone-resorption processes. I have applied this technique in cases which do not fulfill the above mentioned conditions and I have followed the osseous integration of the endobone implants using conventional imaging methods.

Cuvinte cheie: implant postextractional, os-resorbția, integrare osoasă

Rezumat: Când vorbim despre avantajele implantului postextractional imediat, ne referim la conservarea materiei osoase și scurtarea duratei tratamentelor. Această tehnică este recomandată în situațiile în care sunt îndeplinite anumite condiții. Câteva dintre acestea sunt: integritatea pereților alveolari, lipsa proceselor inflamatorii și os-resorbție. Am aplicat această tehnică în cazurile în care nu sunt îndeplinite condițiile menționate mai sus urmate de integrarea osoasă a implanturilor endoosoase folosind metodele imagistice convenționale.

INTRODUCTION

The prosthetic implant treatment has become a worldwide, well defined method, for the restoration of edentulism, with the results of the carried out studies being more and more promising and with a better scientific basis. An essential part is played by the quality and quantity of bone at the implant insertion site. The resorption and atrophy of alveolar processes occur as a result of dental loss. All elements of the alveolar ridges (periosteum mucosa and the alveolar bone) are involved in the atrophy process [7].

After every extraction, the dimensions of the alveolar bone decrease significantly due to the lack of physiological stress (Wolff's law), because of the jaw pressure and last but not least because of trauma suffered during the actual extraction [5]. All of this changes will result in difficulties during the insertion of endobone implants, caused by the reduction in available bone mass. By available bone mass, we refer to the bone mass necessary for implant insertion and evaluating it both for quantity and quality. The dimensional assessment of this bone mass can only be accomplished by using imagistic methods (retroalveolar x-ray, ortopantomography, computer tomography) [1]. To reduce the resorption process which appears after an dental extraction, but also to shorten the number of stages for the prosthetic implant treatment, it is recommended that the insertion of the implant takes place in the same session as the extraction of the irreparable tooth [2, 4].

The post-extraction insertion of an implant is conditioned by the quality and quantity of the remaining, post-extraction bone mass.

Immediate insertion is recommended in situations which meet the following conditions:

- The integrity of the alveolar walls, with sufficient bone mass to give the implants primary stability.
- sufficient height of the alveolar walls
- lack of infectious, cystic and tumorous processes
- the remaining bone allows the implantation in a position useful for prosthetic implants
- the surgical wound can be covered with mucous periosteal flaps from its vicinity

Post-extraction implantation is inadvisable under the following:

- when the alveolar walls have suffered severe damage during the extraction process
- if chronic, infectious, marginal or apical processes have resulted in extensive damage, or have induced an advanced demineralization of the alveolar bone
- if anatomical structures in the vicinity do not allow for the implant to be inserted and can't give to the implant the primary stability necessary for the osseointegration

In the case of general or local diseases which make the prosthetic implant treatment inadvisable [2].

The prosthetic load is applied, just like in the case of classical implantation, at 6 months from the implant insertion.

Some specialists support the idea that immediately applying a load on the implants, or applying one earlier, at 10-14 weeks after insertion, is possible [6,8].

The behavior of implants after insertion into an alveolus with chronic infectious processes has also been studied, with results being mostly positive.

During performed treatments I have encountered situations which have allowed the execution of immediate post-extraction implants and from which I present some imagistic

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CLINICAL ASPECTS

aspects.

CASE PRESENTATION

Case no. 1

Figure no. 1. Osseous resorption at the level of the 36th molar



Figure no. 2. Retroalveolar x-ray at 6 months from the extraction of the 36th molar and the insertion of the endobone implant



Case no. 2

Figure no. 3. Root rest of the 24th premolar

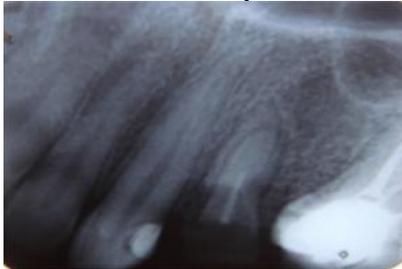


Figure no. 4. Retroalveolar x-ray performed after surgery



Figure no. 5. Retroalveolar x-ray performed after 6 months



Figure no. 6. X-ray performed after the prosthetic load



Case no. 3

Figure no. 7. Root rest and osseous demineralization in region 46



Figure no. 8. Retroalveolar x-ray at 6 months after the root rest extraction and the insertion of the endobone implant



Case no. 4

Figure no. 9. X-ray of the root rests 21 and 23. At the level of the 21 apex we can observe an inflammatory reaction

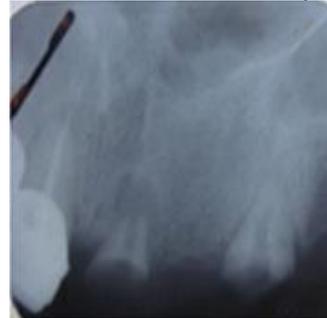


Figure no. 10. X-ray performed at 6 months after the extraction and the insertion of the endobone implants



CLINICAL ASPECTS

Case no. 5

Figure no. 11. X-ray of the number 44 premolar which shows signs of demineralization and osseous resorption



Figure no. 12. X-ray performed after 6 months from the extraction of the premolar, insertion of the implant and the augmentation of the bone defect with alloplastic material



By advantages of post-extraction implantation we refer to the conservation of the available bone mass and the reduction in treatment duration.

- this method preserves the edentulous alveolar ridge and limits the process of post-extraction atrophy
- it is accomplished during a single surgical session, which consists of the extraction and the insertion of the implant
- allow for the insertion of the implant to be performed in a position which is very close to that of the previously extracted, natural tooth
- the treatment duration is reduced by overlapping the time necessary for post-extraction healing and that for the achievement of osseous integration
- as it can be observed in the above mentioned cases, the periimplantary osseous resorption was minimal, under 2 mm, during the period of osseointegration, which isn't any different from that which occurs in the case of classical implants
- the osseointegration can be observed even in the case of implants inserted into an alveolus, which is under the effect of apical and marginal infectious processes.

CONCLUSIONS

Starting from this results, we can conclude, that it is necessary to undertake longterm studies on implants which were immediately inserted into an post-extraction alveolus. Personal results have shown that an osseous healing and an osseointegration, with a high degree of treatment success, can be achieved.

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