

# The bone core technique for small bone defects

E-Poster  
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## Background

The oral surgeon is most commonly confronted with situations where little bone defects in the mandibular or maxillary jaw has to be augmented in the vestibular or palatal and lingual area. To obtain a correct prosthetic position of the implant, it can happen that the implant remains with free threads which has to be adjusted. There are a lot of techniques to correct these minimal expositions around the implants with different biomaterials or mixtures of autogenous bone, biomaterials and membranes.

## Aim

Our purpose was to report about our experience with the bone core technique published by Prof. Khoury et al.<sup>1,2</sup> to correct small defects until 3mm around the implants both in the lingual area and in the buccal area using only autogenous bone.



At the beginning



Healing after bone graft

## Results

After 3 months during the second stage surgery, we evaluated the bone regeneration gained with this technique. In all the cases, we registered a good bone healing. The new bone, regenerated around the implant showed a good revascularization and stability, like the native bone. The average gain that we obtained with this technique was 2,4 mm and this was very important to ensure a minimal thickness of the bone around the implants. In 10 cases ( 7 in the mandible and 3 in the maxilla) we registered an exposure of the micro screw without compromising the bone regeneration. No infections were reported.

## Materials and methods

96 small defects were evaluated around the implants and treated with autogenous bone. We considered only cases where the implants could be inserted inside the contour of the bone both in the maxillary and in the mandible jaw. The implant site was prepared with trephine burs , external diameter 3,5 and internal diameter 2,5mm to collect a carrot of bone. We considered 62 defects in the maxillary (21 in the frontal area canine to canine) and 41 in the posterior area (premolar and molar). The rest of 34 defects were treated in the mandible of the bone. 11 defects were present in the frontl area and 23 in the posterior area. After implantation the bone defects were augmented with the bone carrot stabilized with microscrews. Additionally, bone chips were laid around the bone carrot and compressed.

## Conclusions and clinical implications

In cases that do not require a big augmentation, this technique enables the oral surgeon to collect bone with the trephine burs during the implant placement while using it around the implant to graft the bone defect. Therefore, this method represents a safe and simple procedure to reconstruct small bone defects inside the contour.



Prosthetic rehabilitation



X-ray at the delivery



At the beginning



Extraction



Suture



Small bone defect



Bone graft with carote



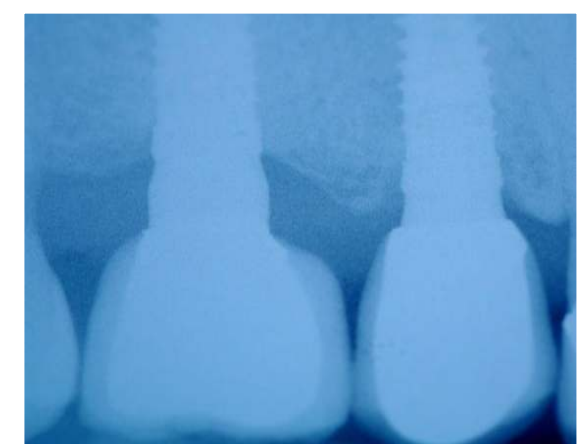
Second stage surgery



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Clinical view after 5 years



X-ray after 5 years

1) Khoury et al. Bone augmentation in oral implantology. Quintessence publishing 2007

2) Khoury F, Doliveux R. The Bone Core Technique for the Augmentation of Limited Bony Defects: Five-Year Prospective Study with a New Minimally Invasive Technique Int J Periodontics Restorative Dent. 2018 Mar/Apr;38(2):199-207.