

# **Clinical Case Study - May 2018**

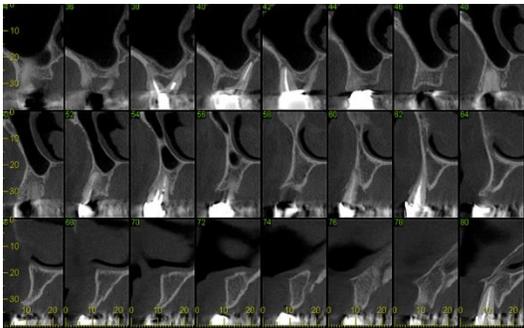
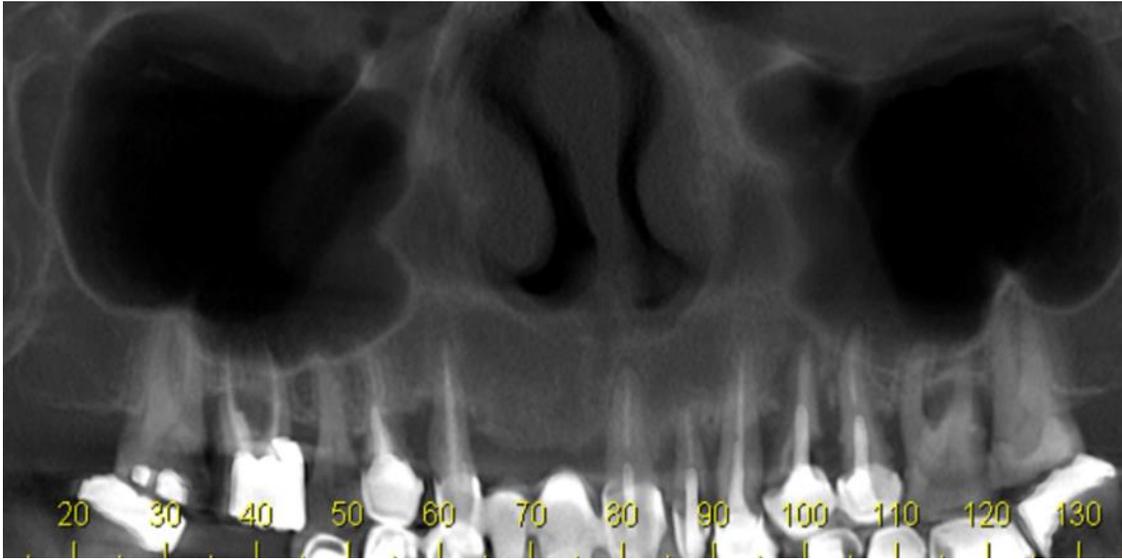
## **Extensive Ridge Deficiency Reconstructing**

**by Bond Apatite®**

- The case describes a rehabilitation process of the upper jaw. As a result of advanced periodontal disease the severe bone destruction is evident. It was thus necessary to laterally augment the narrow ridge in the area of the incisors with regeneration of the alveolar crest and bone restoration in the area of the molars following their removal.
- Following the extractions a composite cement graft material was used which contains biphasic calcium sulfate and HA (Bond Apatite – Augma Biomaterials LTD).
- The surgical procedure of graft placement, using the bone graft cement, is easy and user-friendly to the surgeon and minimally invasive for the patient. This is due to the fact that the full thickness mucoperiosteal flap is minimal, without the need of flap releasing dissection or periosteal incisions in order to achieve a tension free flap as is mandated with other bone substitutes and grafting techniques.
- The grafting technique is easy, fast and simple while adherence to the simple protocol of PPC. Place, Press and Close. Closure of the flap is done under tension and permits up to 3mm exposure of cement during wound suturing.

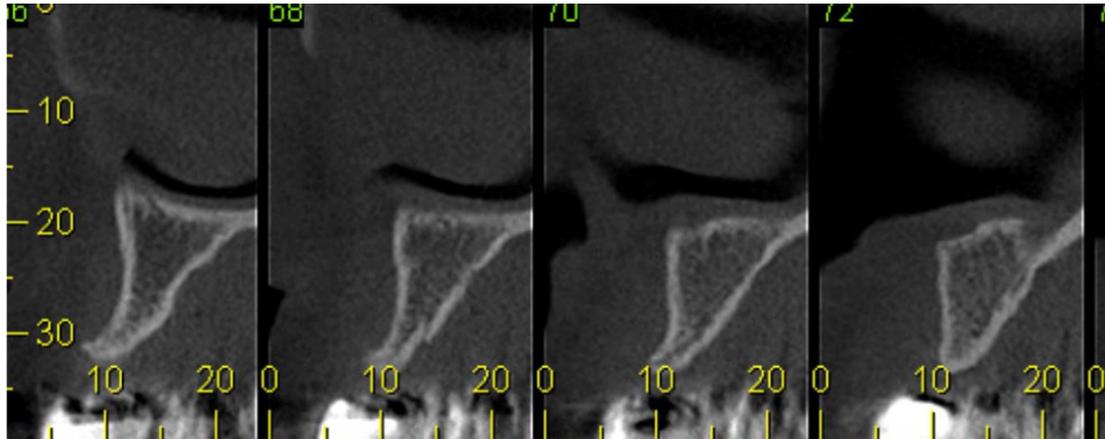
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## Pre-surgical clinical and radiographic view



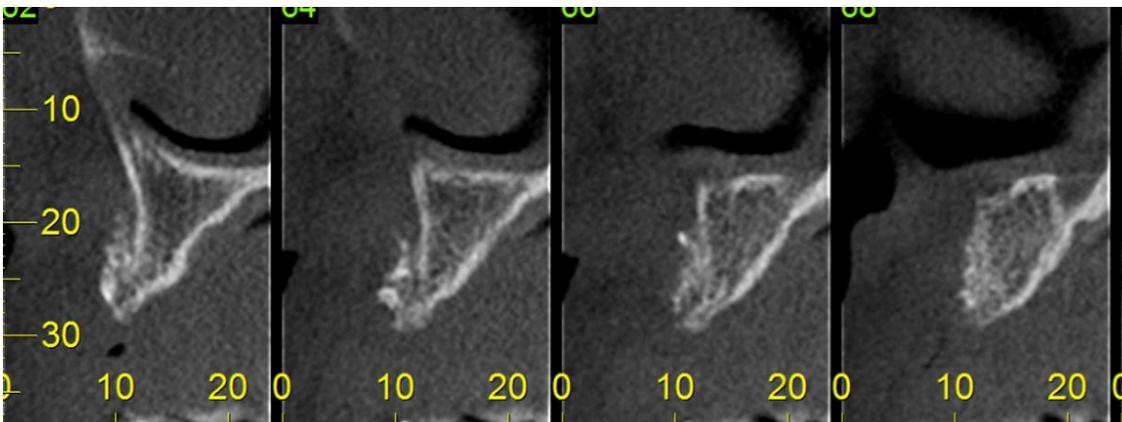
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**Anterio segment sagittal view pre-augmentation**



- Radiographic view anterior segment.
- Three months post augmentation.

**Note that this is newly formed bone, Thus the area is not as radiopaque as a graft performed with a non-resorbable graft.**

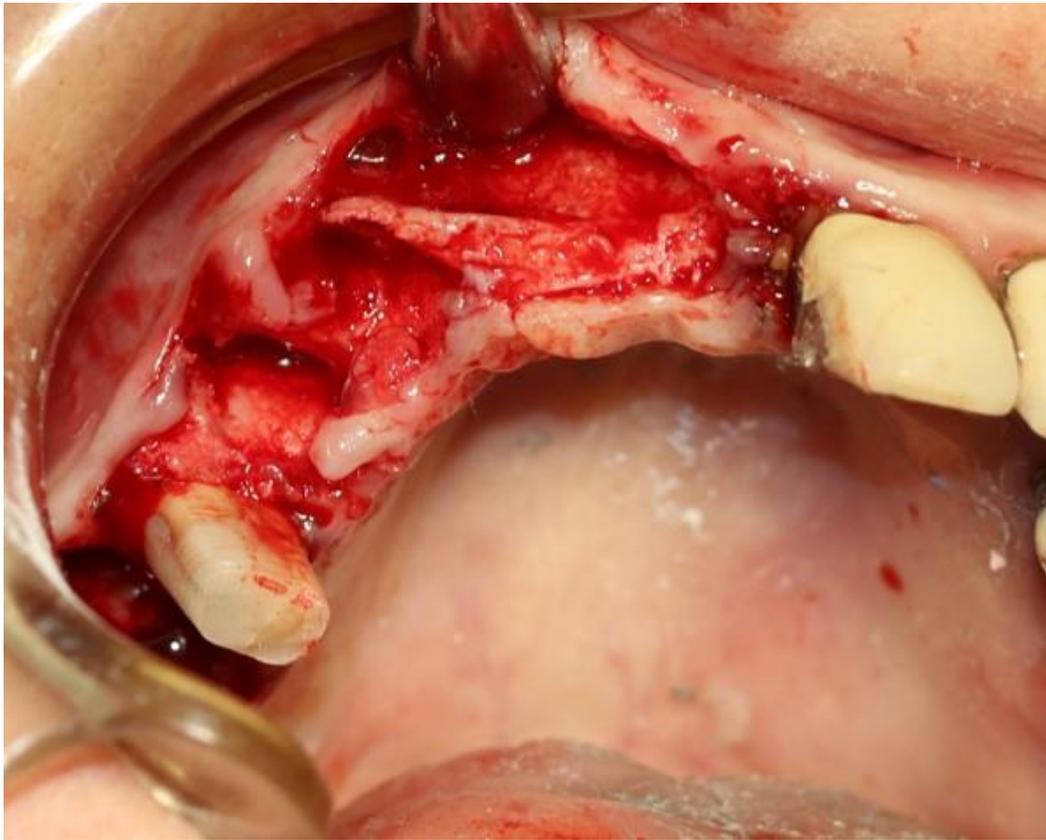


**Pre-surgical view**



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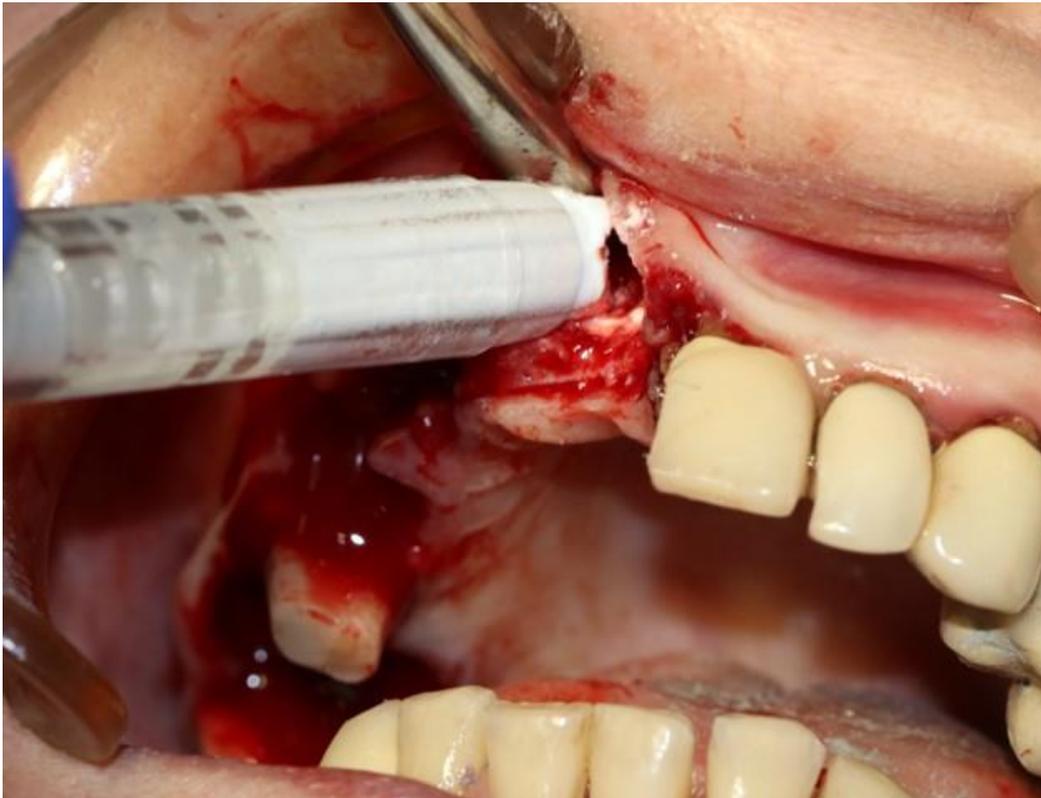
**Immediate post extraction note the narrow residual ridge in the incisors, canine and first molar areas**



Placement of the cement in to the graft site is done by injection, followed by pressure on the cement and its adaptation in to place using sterile gauze and finger pressure on the gauze pad for 3 seconds. Immediately after pressure application and cement adaptation closure should begin by stretching and placing the flap directly over the cement without the use of any membranes or PRF. The closure is maximal and not necessarily water tight. A gap, up to 3mm, is permitted due to the unique cement features to allow healing by secondary intention and rapid soft tissue proliferation across the cement surface. This is a major difference from other bone substitutes or membrane, where if the flap is not tension free and closure is not

primary significant complications of the graft and soft tissue will occur which will compromise the success of the treatment.

### **Deployment of Bond Apatite® in to the host site**

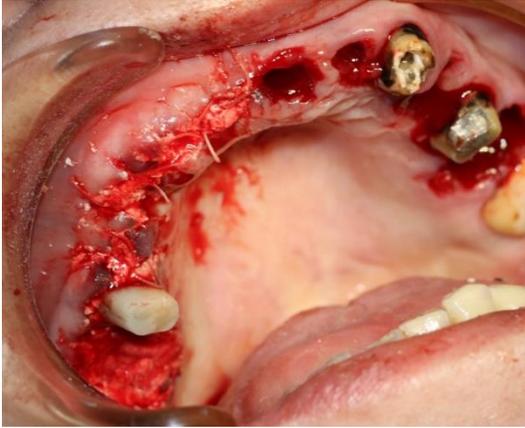


- Naturally, whenever it is possible to adapt the gingival flap with tension and without primary closure, the surgery is easier for the clinician and the treatment sequence has reduced

morbidity for the patient; since the procedure for the doctor is simple and fast, due to the fact that all he/she has to do it expose the graft site, place the material, press it and as soon as it is adapted and gets hard, allows immediate closure of the flap, over it , with tension.

- For the patient the procedure is minimally invasive since no additional vertical releasing incisions are performed. This prevents unnecessary trauma, which significantly reduces post operative pain, swelling, and other accompanying sequelae that are typical in cases where the treatment is done with tension free flap. In addition, a gingival flap where releasing incisions were not done and is in tension over the graft material, is a more stable flap. The flap is not connected the movable musculature in the area, which causes the reduction of complication from suture line openings. Another benefit of flap closure with tension is the stability of the graft material during the healing period; it is critical to the bone regeneration process.
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**Immediate closure over the graft**



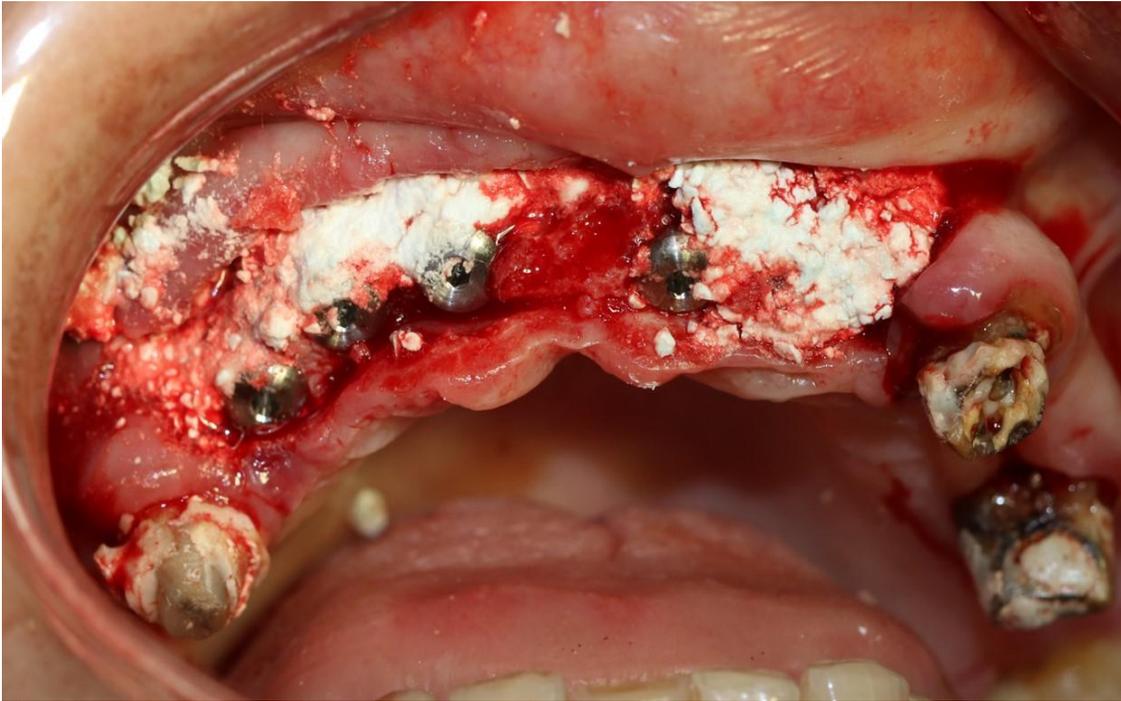
**Soft tissue view three months post augmentation**



**Alveolar view full thickness flap elevation during implants placement**



**Addition of Bond Apatite® to enhance ridge thickness**



**Before**

**After**

