

Case Report

BoxTechnique Using OraGraft Mineralized Bone Void Filler

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Several dental procedures address implant placement in partially or totally edentulate patients.¹ Problems associated with implantation in these patients often arise due to limited bone height or width of the mandible. In such cases, mandible augmentation is required before implantation can take place.²⁻⁴ Other regeneration techniques, such as guided bone regeneration (GBR), also exist for these bone defects.⁵⁻⁶ Some techniques focus on ridge augmentation prior to implant placement while others perform both procedures simultaneously.²⁻⁴

A novel procedure known as the BoxTechnique aims to simultaneously augment the mandibular ridge and insert implants while reducing surgical trauma. Considered a Guided Bone Regeneration (GBR) technique, the BoxTechnique uses only resorbable materials, avoids autologous bone grafting, and allows for early transfer of implant position.

The following case presentation involves simultaneous mandibular augmentation and implant placement using the BoxTechnique and a mineralized bone void filler, OraGraft®.

PATIENT

- 56 year old, Female; Good Health

DIAGNOSIS

- Partially edentulous – mobile mandibular denture
- Severe class 5 (Cawood and Howell classification) bone mandibular atrophy (**Fig 1**)

TREATMENT

- Full bone regeneration and insertion of 6 implants performed in 1 step
- 10 cc of mineralized human bone filler used
- All 6 implants discovered at 6 months
- 12 mm horizontal augmentation
- 10 mm vertical ridge bone augmentation on buccal side (**Fig 2**)
- Prosthesis performed and positioned 2 days after taking impressions (**Figs 3-4**)

OUTCOME

- Successful full-arch reconstruction of severe widely atrophic mandibula (**Fig 4**)



Figure 1: Pre-operative mandibular atrophy

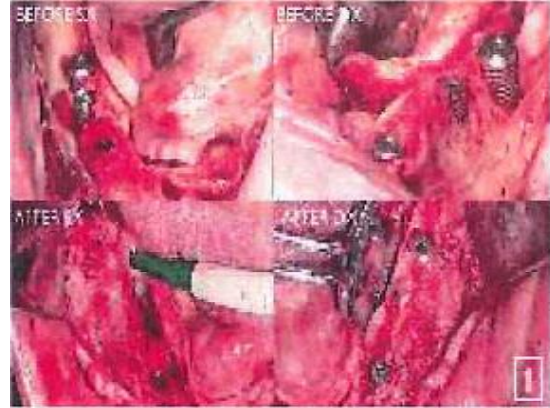


Figure 2: Intra-operative ridge augmentation



Figure 3: Implant placement



Figure 4: Post-operatively reconstructed mandibula

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