



Clinical Experiences of Using Newly Commercially Available Combination of Allograft and Xenograft in Lateral Ridge Augmentation Procedures

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INTRODUCTION

- Lateral ridge augmentation using particulate graft materials is known to be a predictable procedure. A variety of different techniques are employed, these include particulate grafting, membrane use, block grafting, and distraction osteogenesis.
- Several new materials and techniques have emerged in recent years.
- Combined use of bone grafts or bone replacement substitutes with barrier membranes are advocated in bone regeneration of large defects.
- A combination of allograft fibers/granules and xenograft may promote further the ingrowth of osteogenic cells and osseointuctive scaffolding for predictable ridge augmentation.
- To date, there is no research on the efficacy of a mixture of allograft fibers/granules and xenograft for lateral ridge augmentation or contour augmentation GBR procedures.

CLINICAL APPLICATION

Advantages:

- Autogenous bone and xenograft material combines the biological properties of autogenous graft and the slow resorption of mineralized xenografts.
- Combination of cancellous allograft as a rapidly resorbing graft, and bovine xenograft as a buccal overlay resist resorption and preserve the buccal contour
- Less radiographic vertical bone loss over time when larger proportions of deproteinized bovine bone material was used

Disadvantages:

- Costs associated with combining allograft and xenograft
- Multiple staged surgeries, with possibility of requiring additional grafting at time of implant placement

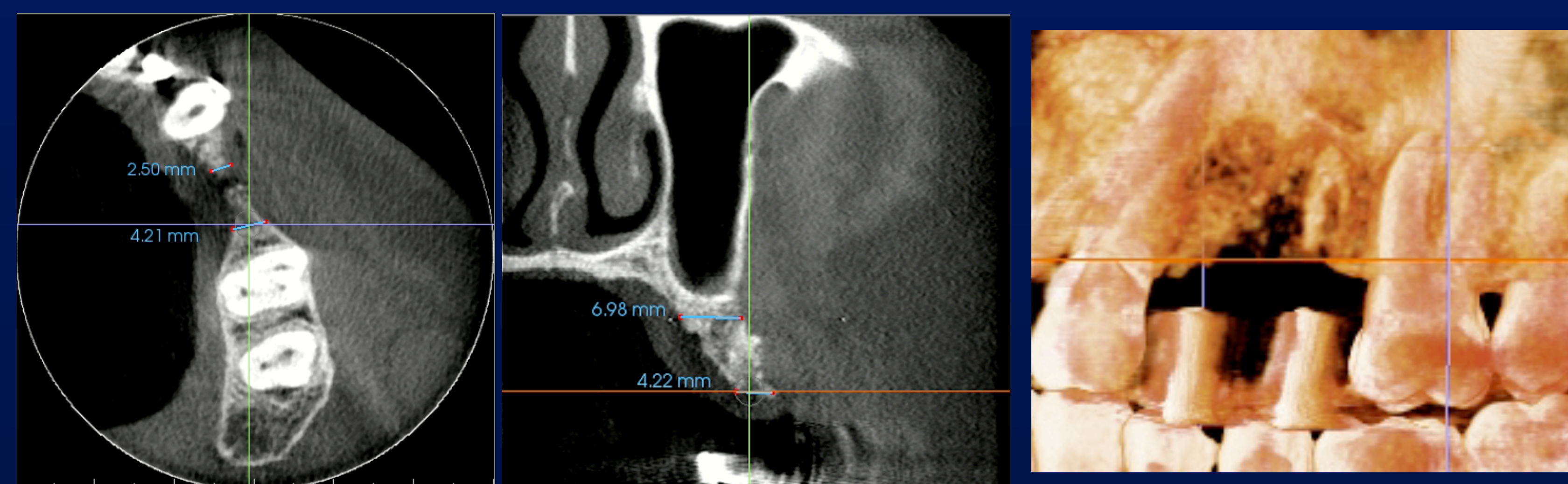


Figure 1. Feasibility CBCT Scan

TECHNIQUE

Example Case:



This technique requires the following items:

- Collected autogenous bone
- Tenting screws appropriate to defect depth
- Porcine pericardium collagen membrane
- Vallomix™ [demineralized cortical allograft/Geitslich Bio-Oss xenograft]
- Membrane tacks
- Resorbable bilayer collagen membrane

Step 1: Flap elevation → Periosteal Release → Heme Collection → Autogenous bone collection → Decortication



Step 2: Measuring ridge deficiency → Placement of tenting screw(s) → Placement of porcine collagen membrane [Straumann Jason Membrane]



Step 3: Securing porcine collagen membrane → Mixing of Autogenous bone and Vallomix™

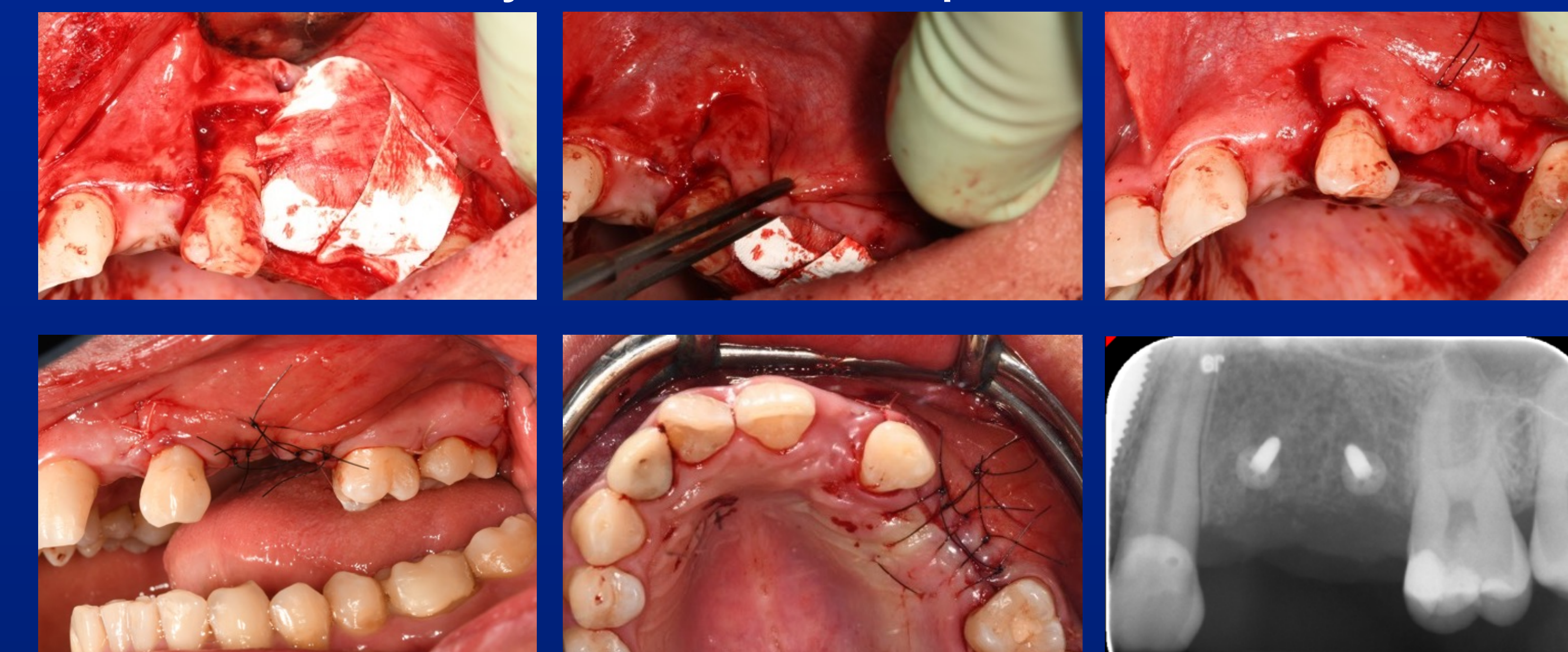


Step 4: Application of Vallomix™ → Placement of resorbable collagen membrane via double membrane technique [Geitslich Bio-Gide®]



TECHNIQUE

Step 5: Placement of double membrane cont'd → Approximation of closure → Primary Closure → Post Operative PA



RESULTS



Figure 2. 6 Month Follow Up

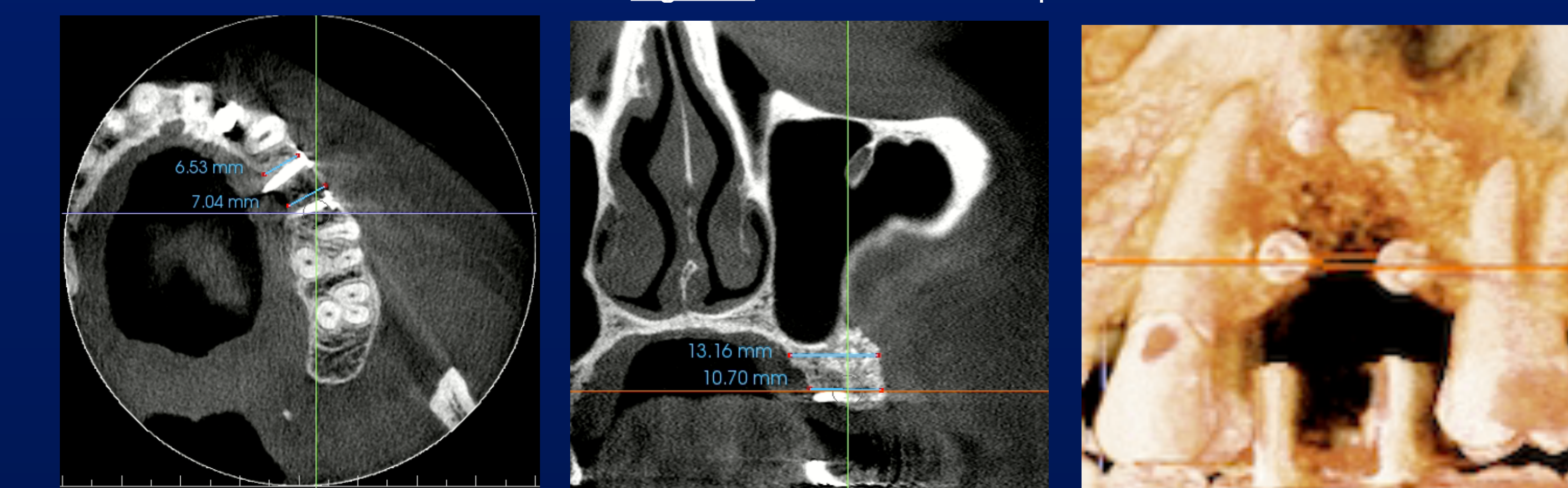


Figure 3. 6 Month Post Op CBCT

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