Two Cases of Bone Augmentation with Carbonate Apatite

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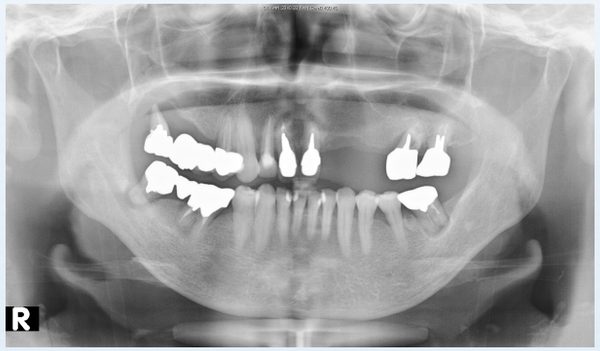
Keio University 1858 CALAMVS GLADIO FORTIOR

Background

Guided Bone Regeneration is performed to reconstruct the alveolar crest to an appropriate morphology to achieve more functional and aesthetic restoration. Here, we present two cases of GBR with carbonate apatite (Cytrans®Granules).

Case1

- 59-year-old Female
- Chief complaint : cannot chew



First visit examination

Case2

- 66-year-old Female
- Chief complaint : needs treatment for periodontitis

First visit examination

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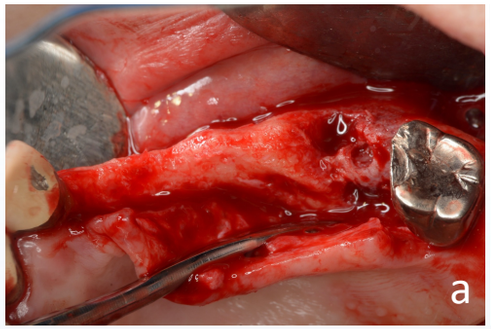
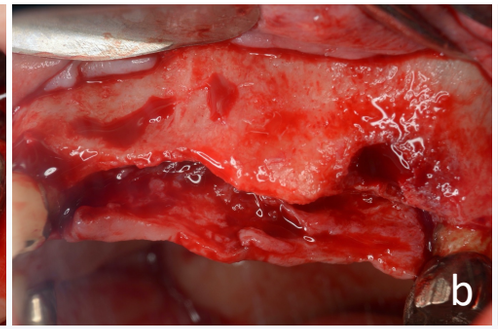
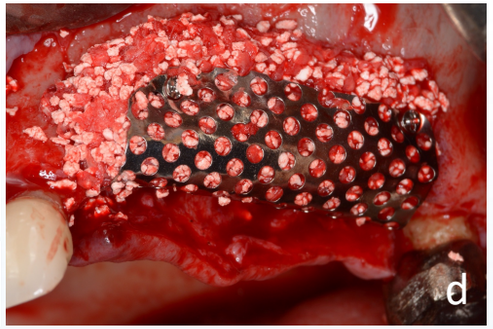
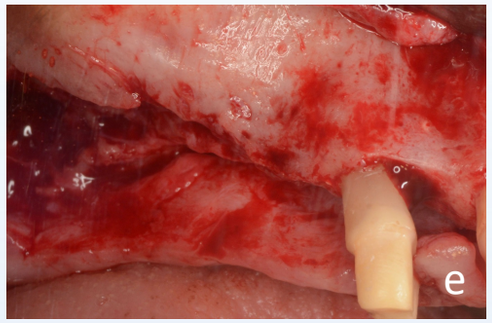
Case1

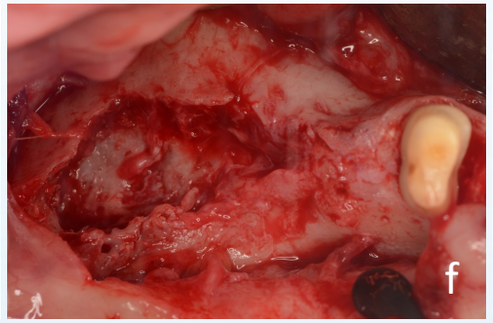


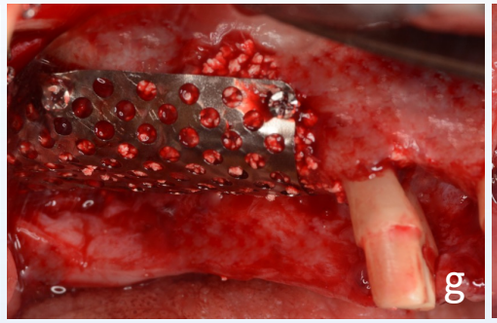


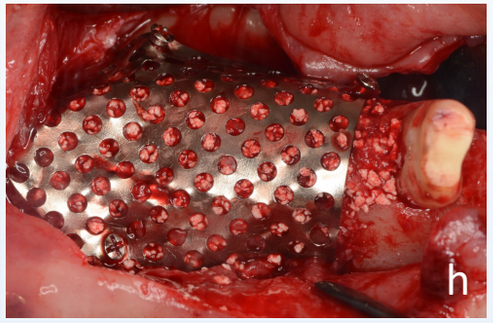


Case2









Materials and Methods

Case1

A staged approach GBR was performed for the number #10-14 missing. (a)(b) Clinical appearance of horizontal and vertical ridge defect ; (c)(d) Placement of the mixture of carbonate apatite and autogenous bone with titanium mesh.

Case2

A staged approach GBR was performed for the number #3,4 missing. (e)(f) Clinical appearance of horizontal and vertical ridge defect ; (g)(h) Placement of the mixture of carbonate apatite and autogenous bone with titanium mesh.

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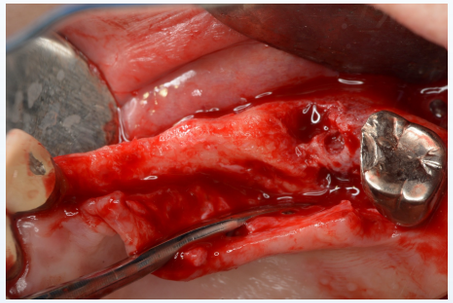
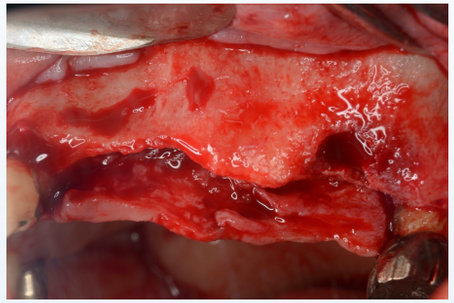
Results

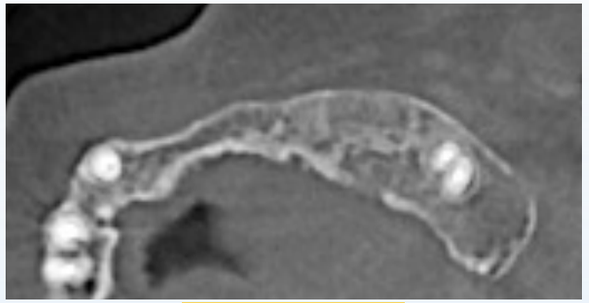
Case1

About 6 months after GBR, implant placement was planned. Bone augmentation was achieved horizontally in areas #10-12 and vertically in area #14.

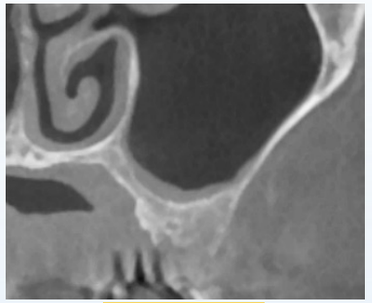
Pre-treatment





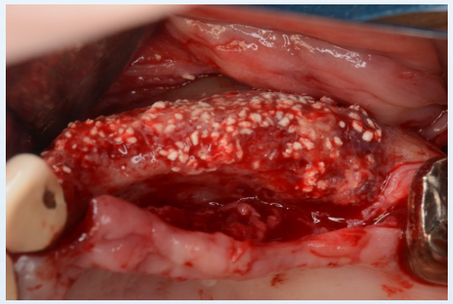


areas #10-12



area #14

6M after GBR



areas #10-12

area #14

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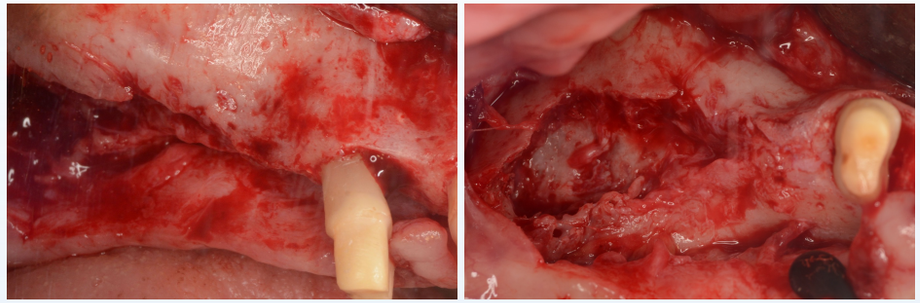
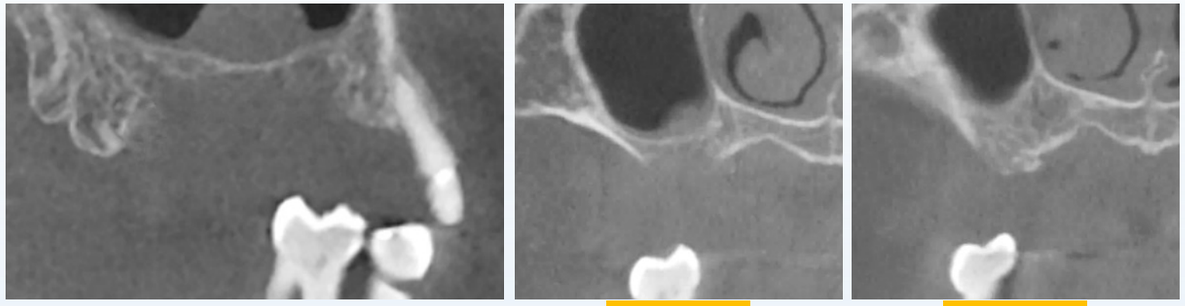
Results

Case2

About 6 months after GBR, implant placement was planned. Bone augmentation was achieved vertically in area #3 and horizontally and vertically in area #4.

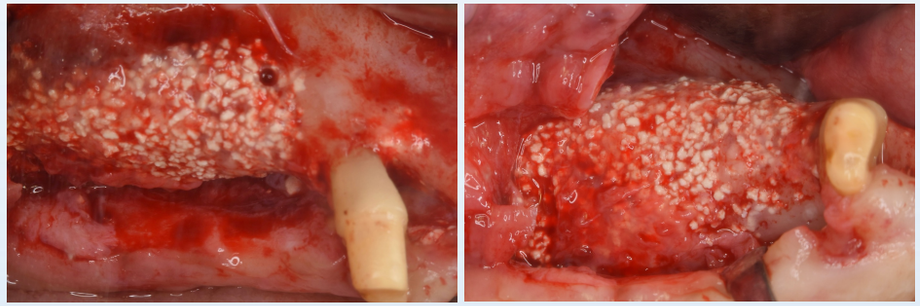
Pre-treatment

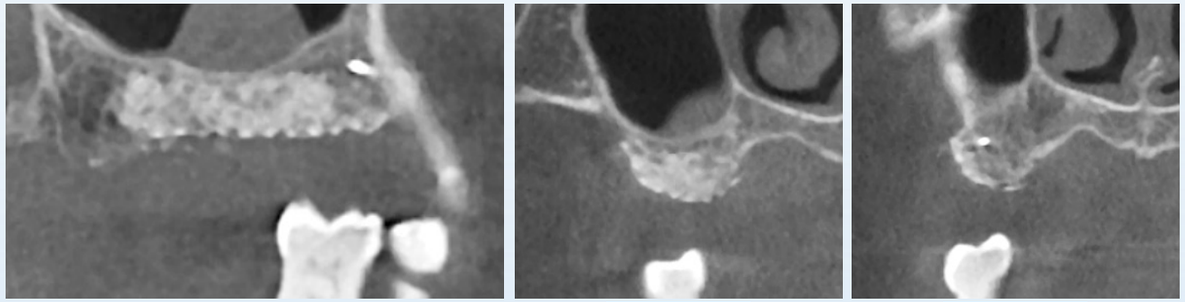




area #3 area #4

6M after GBR





area #3 area #4

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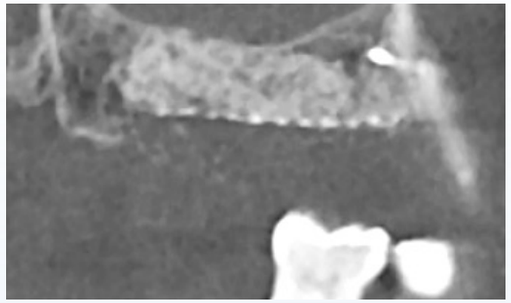
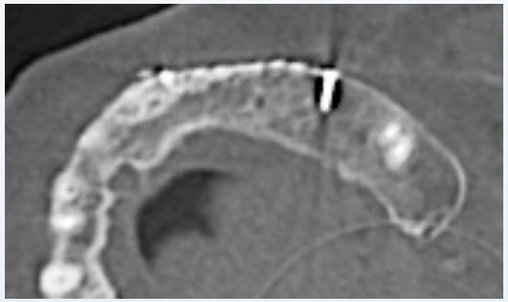
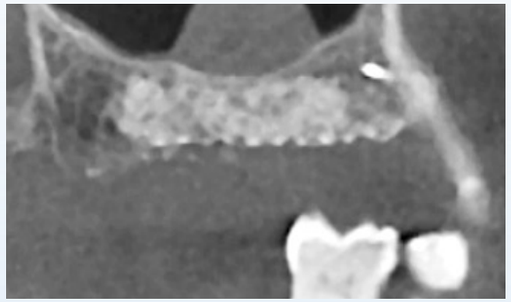
	Case1	Case2
Immediately after GBR		
6M after GBR		

Results

When comparing the immediate postoperative period to 6 months later, there was little resorption of the bone substitute in the waiting period.

Conclusion

While primary closure and stability of the graft material are prerequisites for successful GBR, we consider carbonate apatite is a good material based on the results of this study. Although the number of cases is still small, we will continue to report on this material in the future.