Non-abrasive peri-implantitis treatment to maximize titanium surface cytocompatibility

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Introduction

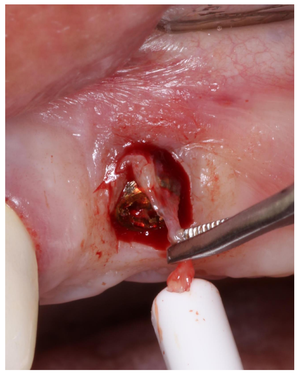
It has been suggested that instrumentation of the implant surface results in release of titanium particles which may induce an inflammatory response[1]. Decontamination of the implant surface using chemotherapeutic agents during treatment of peri-implantitis defects may minimize the release of these titanium particles and preserve the implant's surface properties[2]. Additionally, the use of adjunctive biological materials such as enamel matrix derivative (EMD) has been positively associated with implant survival[3].

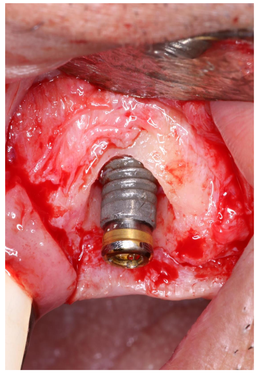
Methods and Materials

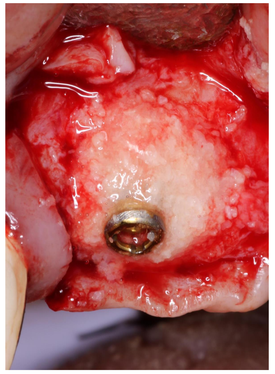
I am presenting a case where a peri-implantitis defect was treated using a non-abrasive approach which included removal of the surrounding granulation tissue, burnishing of the exposed titanium surface with a NaOCl solution, placement of allograft combined with EMD, and a connective tissue graft.

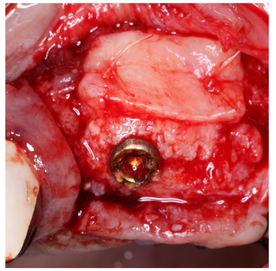
Pre-op

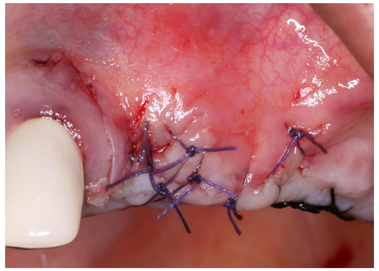
Surgical Procedure



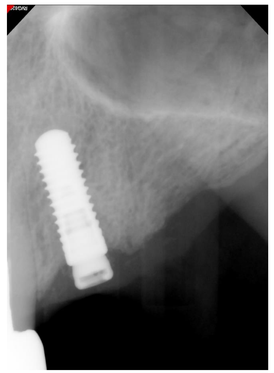








Post-op (6 months)



Results

At a 6 month follow up, radiographic presentation of the peri-implant defect appears to have bone fill. Clinically, the overlying soft tissues appears thicker.

Conclusions

A peri-implantitis treatment method in which the implant surface is burnished with NaOCl and the defect was grafted with allograft mixed with EMD can halt the progression of peri-implantitis while re-establishing healthy bone levels. Further research with extended follow-up would be necessary to determine reproducibility and long-term effectiveness of this technique.

References

[1] **Eger et al**. *Scientific Report*; 7:39612. (2017)
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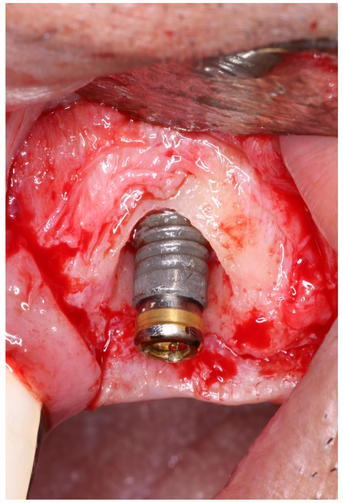
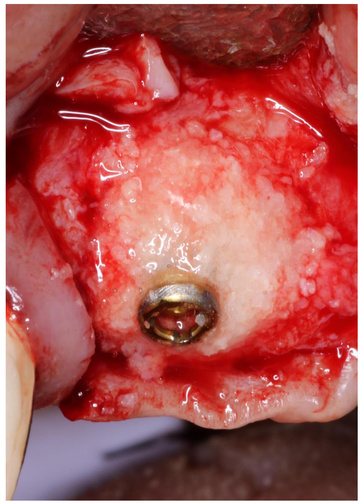
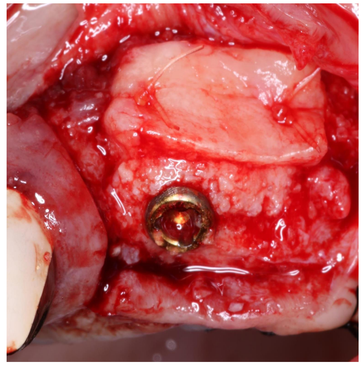
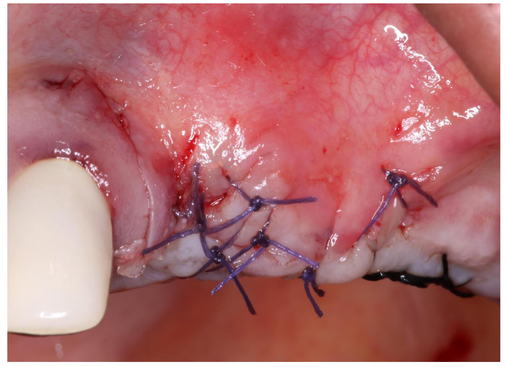
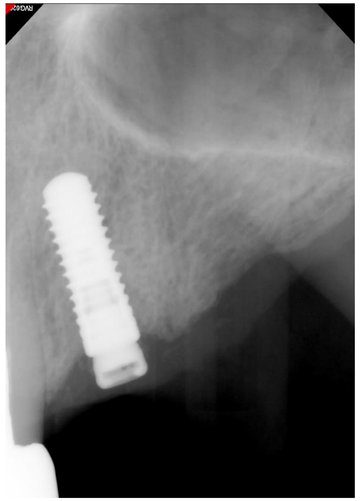








Post-op (6 months)



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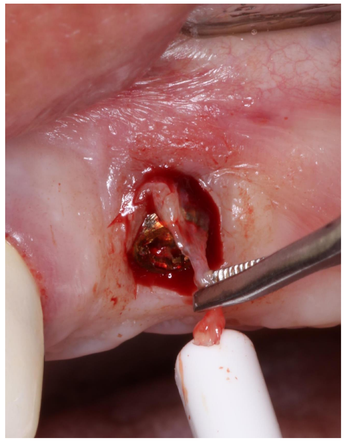

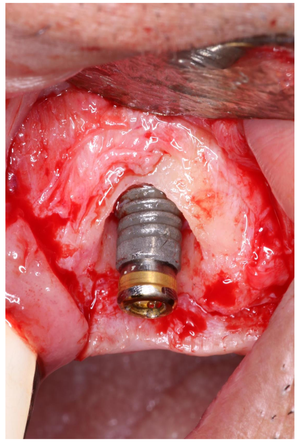

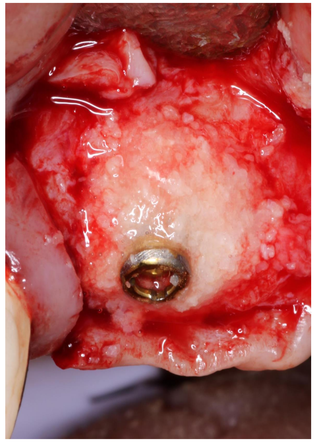

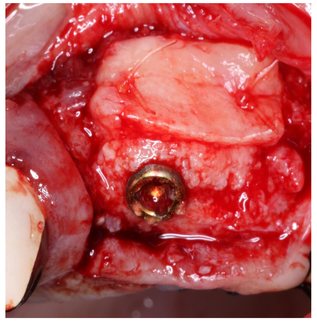

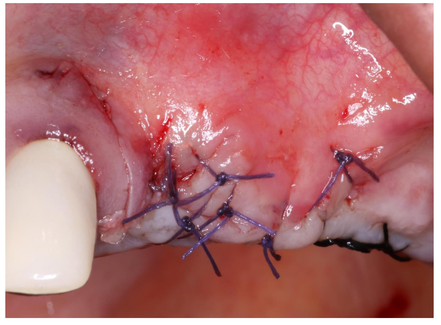

Methods and Materials

The peri-implantitis defect was treated using a non-abrasive approach:

- 0.5mm submarginal incision and intrasulcular incision was made around the implant to remove granulation tissue with minimal contact to the implant surface. FTF was elevated on the buccal.
- A solution of 1 part of NaOCl to 10 parts sterile water was applied via gentle burnishing with gauze for 10 seconds
- The implant was irrigated with ample saline
- A combination of allograft with EMD was placed in the defect
- A SCTG was placed buccal to the implant
- Primary closure was be achieved with 5-0 vicryl sutures
- Results were assessed radiographically after 6 months of healing

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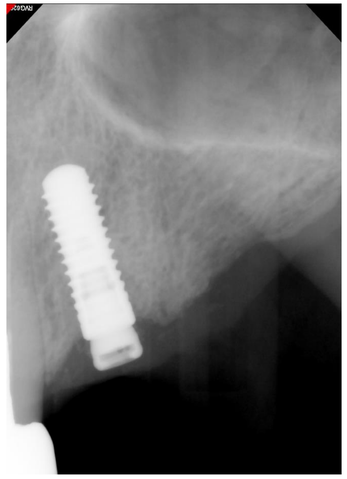
Pre-op	Post-op (6months)