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A Treatment Strategy to Achieve the Complete Healing from Severe Peri-Implantitis

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Introduction

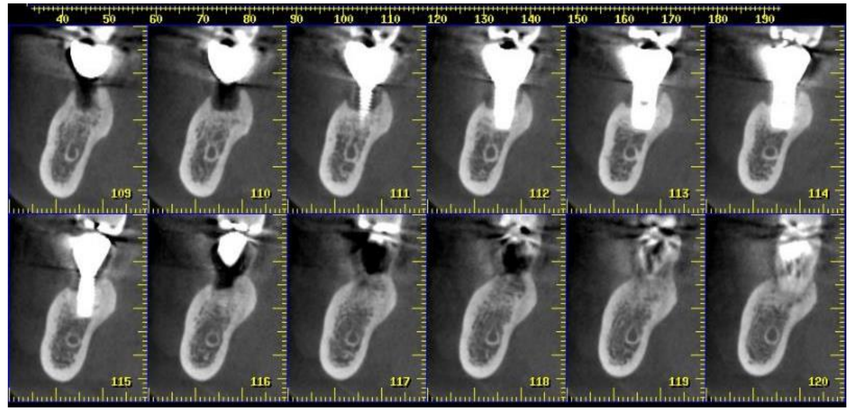
Peri-implantitis is a biological complication of the dental implant, and the absolute number of peri-implantitis is supposed to be increasing due to the recent spread of implant therapy. Currently, various studies have been conducted on the pathology and clinical diagnosis of peri-implantitis. However, the effective method has not yet been established, and this issue remains a major challenge in achieving long-term implant success. Here, we report that the clinically favorable result for peri-implantitis was obtained by the combination of mechanical cleaning with a titanium wire brush and autogenous bone grafting.

Diagnosis

Chief complaint of the patient: Discomfort of soft tissue around the implant.

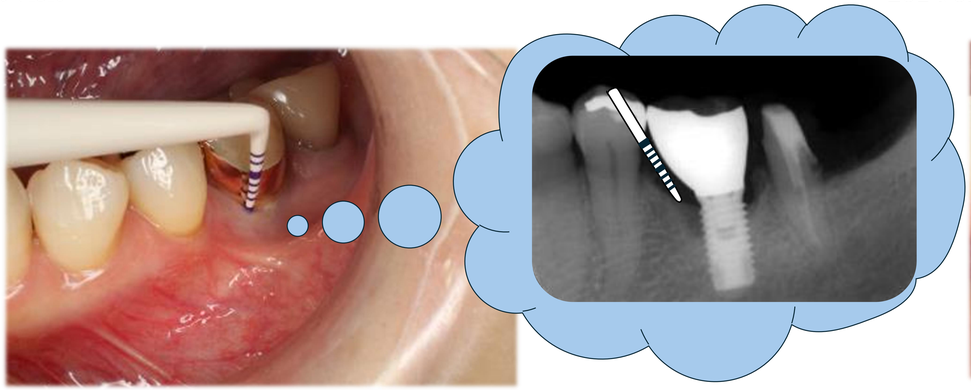
History: The dental implant of molar region had been placed at another hospital more than five years ago, pus was found to be draining from the pocket, and X-ray photos revealed severe bone defect. The patient was diagnosed with peri-implantitis.

2013/08/28 First visit

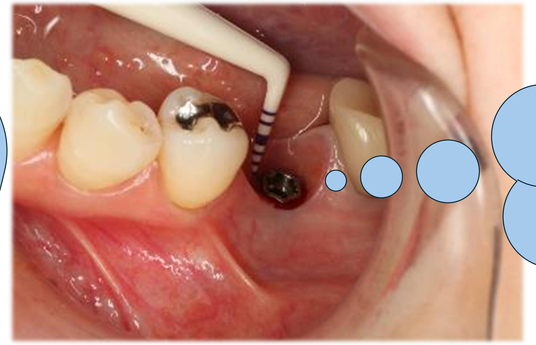


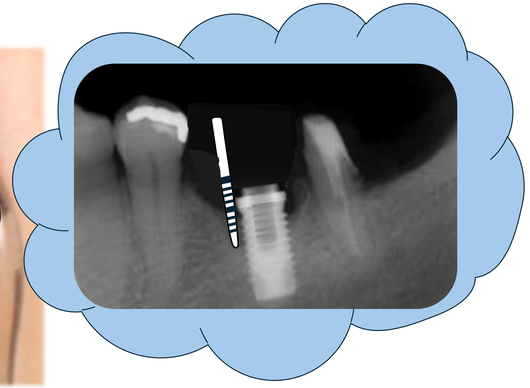
2014/05/01 Preoperative X-ray photos

Pus was observed



Probing depth was 5 mm

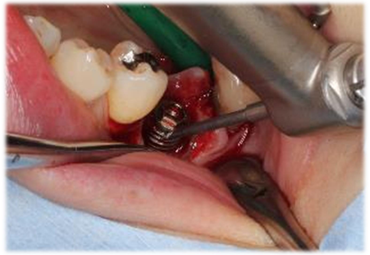


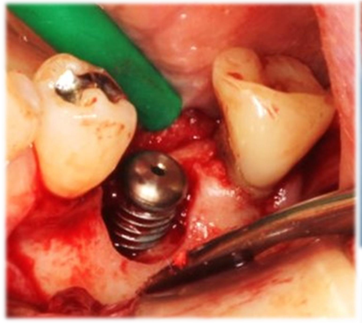


Probing after removal of superstructure

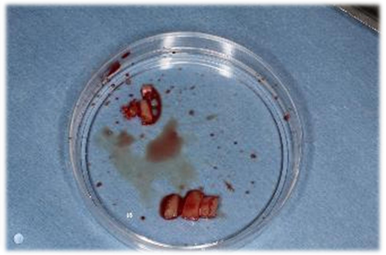
Method and Results

2014/05/01

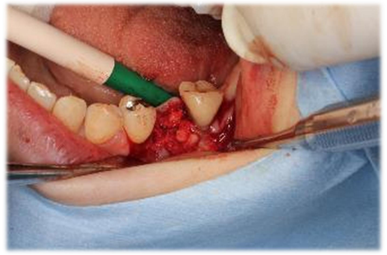




Decontamination with titanium wire brush



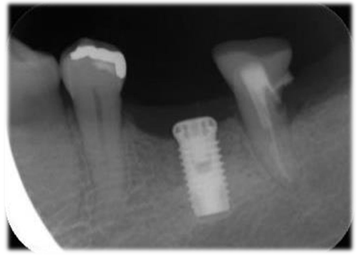
Autologous bone was harvested from the buccal side of molar region

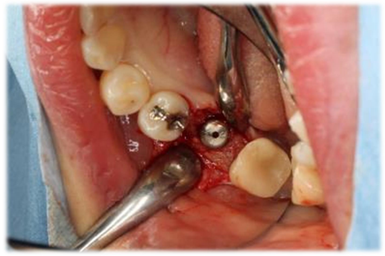


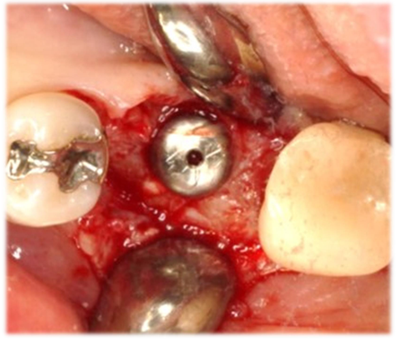
Autogenous bone graft

6 months later

2014/11/13 2nd Surgery





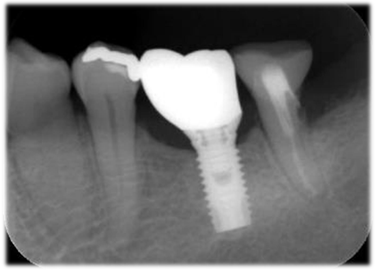


Bone formation was confirmed

The postoperative soft tissue was kept in good shape, and the grafted bone around the implant was also restored. Although about ten years have passed since the final restoration was placed on, bone resorption was not observed in X-ray examinations at the regular checkup. Also, the patient is fully satisfied with the function and aesthetics.

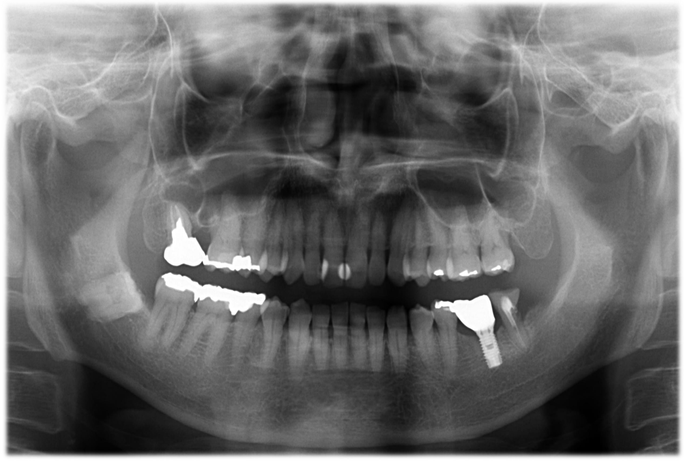
2014/12/25 Provisional restoration

2015/02/24 Final restoration



2016/01/05 One year

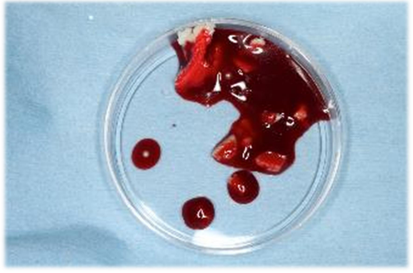
2018/08/29 Four years



2023/10/04 Eight years

Conclusion

Complete healing from peri-implantitis was accomplished with recovery from peri-implant bone loss. This implant has been maintained in good condition for ten years, suggesting that this method is effective to recover peri-implantitis debridement with titanium wire brush and autogenous bone graft is one of the effective treatment option for peri-implantitis.



Autogenous bone grafting

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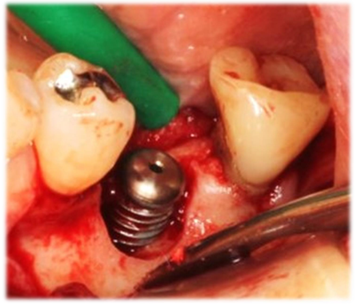
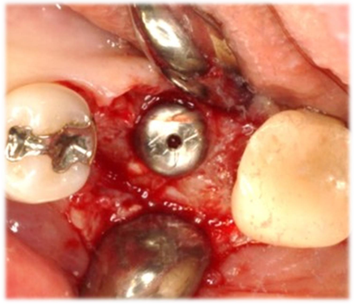
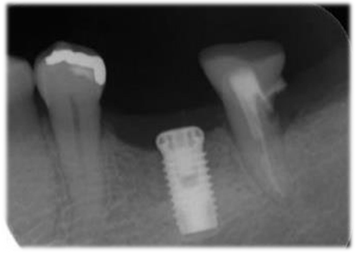
Titanium wire brush







Recovery