Case Report

Immediate loading protocol with Neoss ProActive® Edge implant to replace a missing single tooth in the posterior maxilla.

Dr. Franco Rizzuto, Italy

Patient: 69-year old woman in good health.

Clinical situation: Missing upper premolar with buccal bone resorption resulting in an apparent gingival defect.

Treatment plan: To replace the missing tooth with a Neoss ProActive® Edge implant applying an immediate loading protocol in conjunction with autologous connective tissue augmentation.

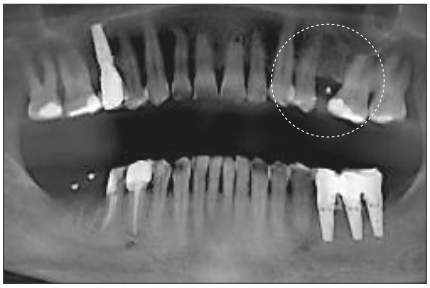


Figure 1

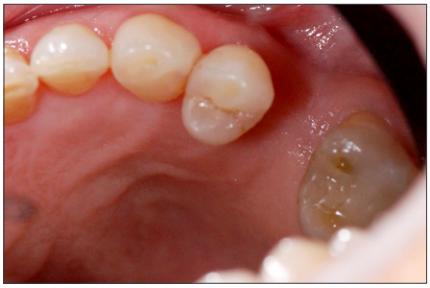


Figure 2

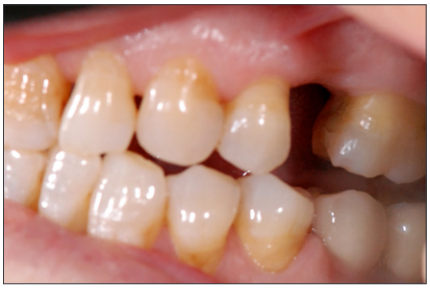


Figure 3

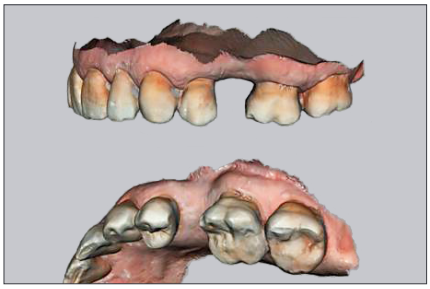
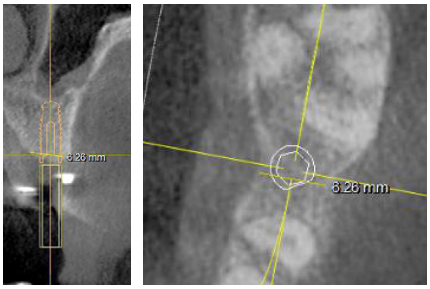


Figure 4



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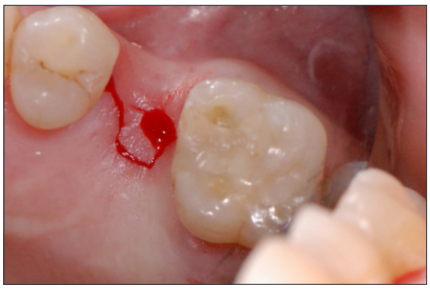

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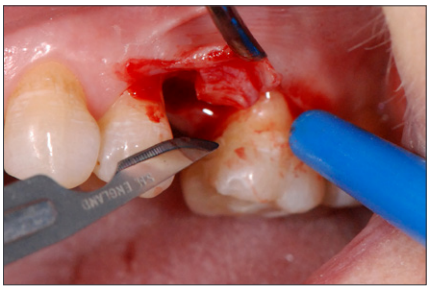

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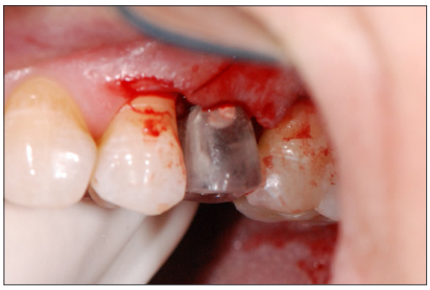

Figure 8

Female patient, who needed replacement of a missing second upper left premolar (Figure 1). The clinical examination showed evident buccal bone loss in the area (Figure 2 and 3).

Intraoral scanning (Figure 4) and CBCT examination (Figure 5) was performed for treatment planning. The CBCT clearly showed the buccal defect, a bone thicknesses of 6 mm in buccal-palatal direction, and a bone height of 15 mm.

It was decided to correct the buccal defect without bone augmentation. Instead, soft tissue augmentation using a roll flap procedure was performed to increase the buccal soft tissue volume. A buccal muco-periosteal incision was made (Figure 6) followed by de-epithelialization of the raised flap (Figure 7) and finally rolling and securing the flap to the buccal side.

A customized surgical guide was made and used with the initial 2.2 mm drill (Figure 8).

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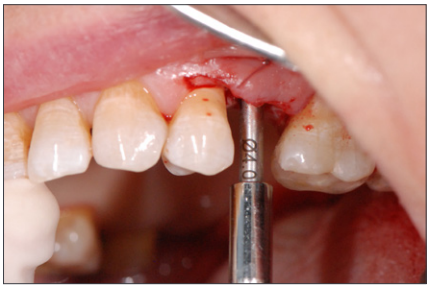


Figure 9

Figure 10

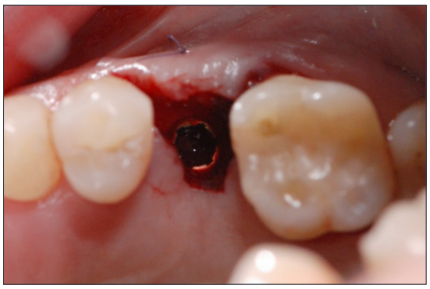


Figure 11

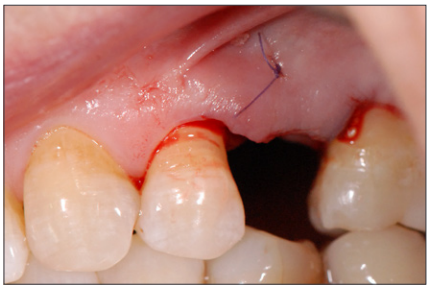
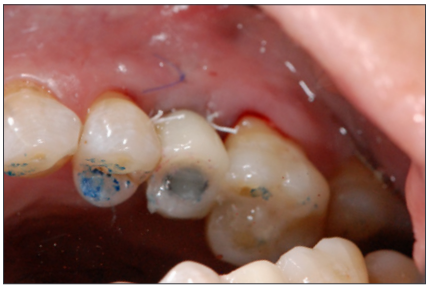


Figure 12



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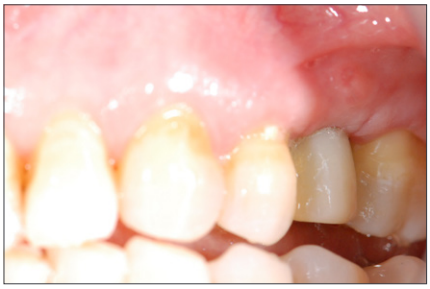
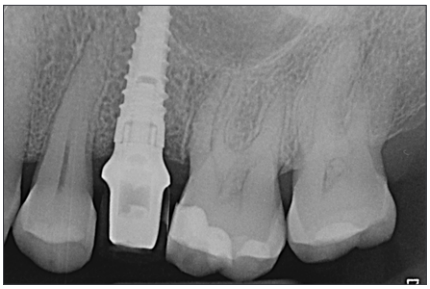


Figure 14



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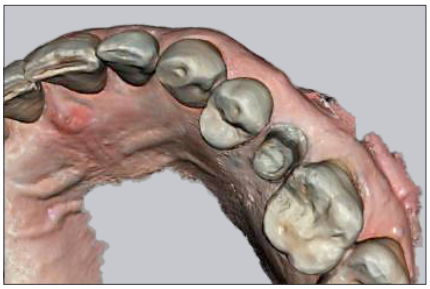

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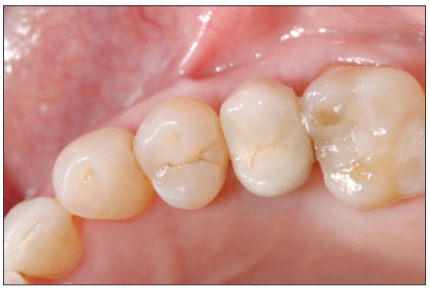

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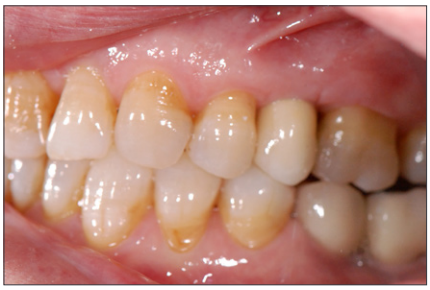

Figure 18

After the initial drill, the implant site preparation was finalized using a Ø4.0 mm countersink (Figure 9) followed by placement of a 4.0×13 mm Neoss ProActive® Edge implant (Figure 10). Insertion torque reached 50 Ncm and resonance frequency analysis reached 70 ISQ, confirming excellent primary stability of the implant.

Occlusal and buccal view of the defect augmented with the autologous connective tissue roll flap using a buccal suture for optimal soft tissue adaptation (Figure 11 and 12).

The implant was immediately provisionalized. A customized provisional crown was fitted on the definitive abutment (Prebable Ti Abutment) and placed out of occlusion (Figure 13).

Clinical (Figure 14) and radiographic (Figure 15) follow-up 15 days following surgery, showing healthy peri-implant tissue.

Digital impression for delivery of the permanent metal-ceramic crown (Figure 16).

Permanent crown delivery 45 days after surgery. The augmented site showed maintained volume and healthy, maturing soft tissue (Figure 17 and 18).

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