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ESTHETIC REHABILITATION OF ANTERIOR TEETH FOLLOWING TRAUMATIC AVULSION A COMPUTER-GUIDED IMPLANT SURGERY

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CLINICAL CASE DESCRIPTION

INITIAL SITUATION

Female patient, with 27 years old, appeared in the dental clinic 5 days after the avulsion of three anterior teeth (11, 21 and 22) due to a fall. Due to the emergency situation no photos were allowed to be taken.



Given the most important aesthetic issue, a provisional resin bonded bridge was fabricated with acrylic teeth in the edentulous space and a metallic reinforcement in the palatal surface extending to premolars to provide sufficient retention. (Fig.1-3)



TREATMENT PLAN

3 months: clinical examination (Fig.4-5), study models, CBCT scan (i-CAT, Imaging Sciences@USA).

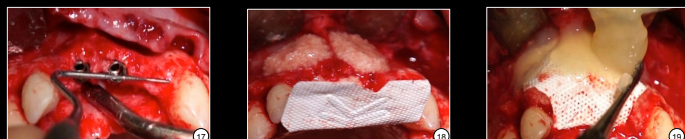
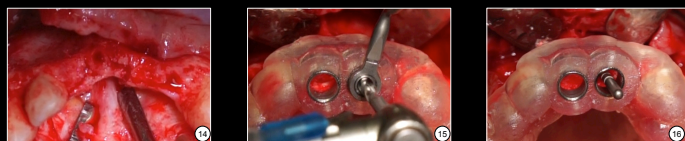


Through a virtual teeth planning, two implants were simulated in position 11 and 21 with a cantilever screwed bridge 11-21-22. Surgical guide by Materialise®. (Fig.6-13)



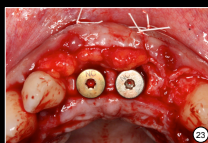
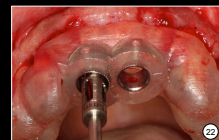
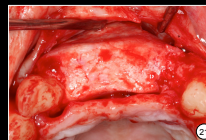
TREATMENT NOTES – computer guided implant surgery

- #11 and #21: Two bone-level implants (@Straumann, NC 3.3*14mm). (Fig.14-17)
- Buccal surface: GBR with BoneCeramic®/Straumann, a titanium-reinforced dPTFE membrane (Cytoplast® Osteogenics Biomedical) and platelet-rich plasma over it. (Fig.18-19)



TREATMENT NOTES – connective tissue graft surgery

9 months: thin soft tissue buccally (Fig.20). Bone augmentation achieved (Fig.21). Surgical guide was used to indicate the implants position (Fig.22). Two connective tissue grafts from the palate were placed in the buccal surface. Provisional prosthesis was reduced. (Fig.23-25)

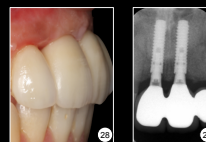


TREATMENT NOTES – connective tissue graft surgery

11 months: Provisional acrylic screw bridge to initiate soft-tissue remodeling (3mo). (Fig.26-28)

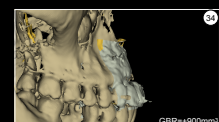
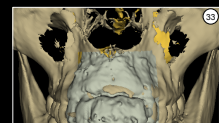


15 months: screw-retained ceramic crowns 11-21-22 and veneer on tooth 12. (Fig.27-30)



TREATMENT NOTES – follow-up appointments

The patient was satisfied with the final result. 24 months after the first surgery, a CBCT scan was done, with patient's approval, to evaluate bone stability over time. Hard and soft-tissue are stable. (Fig.31-35)



FINAL RESULT

