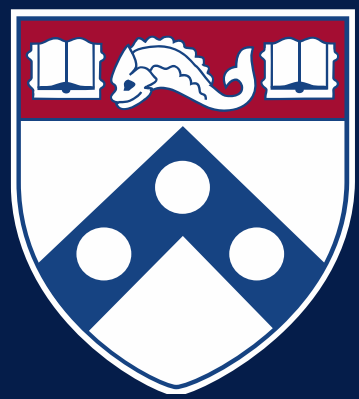




Conventional and Digital Workflow for Fully Guided Implant Placement with Connective Tissue Grafting in the Esthetic Zone

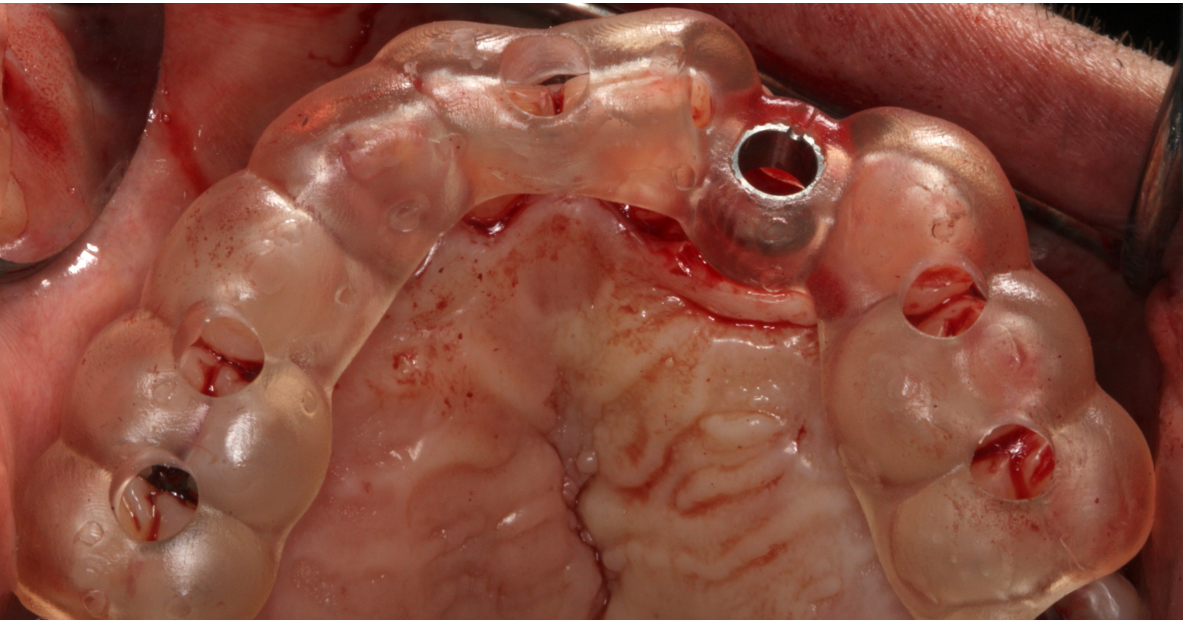


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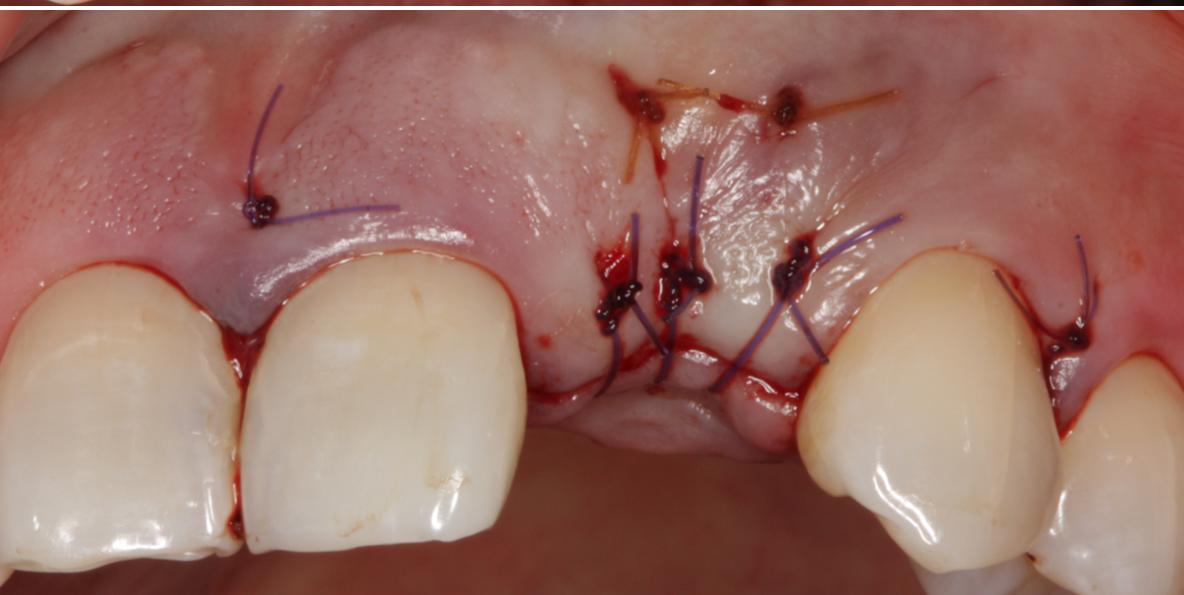
Introduction

Implant dentistry has evolved from a surgically driven to a prosthetically driven approach, where correct implant positioning is key to long-term functional and esthetic success. The physiological changes occurring after tooth loss impact peri-implant tissues compared to neighboring natural teeth. Various surgical techniques are utilized to minimize these dimensional changes, with soft tissue volume augmentation procedures indicated to enhance the soft tissue thickness and contour.



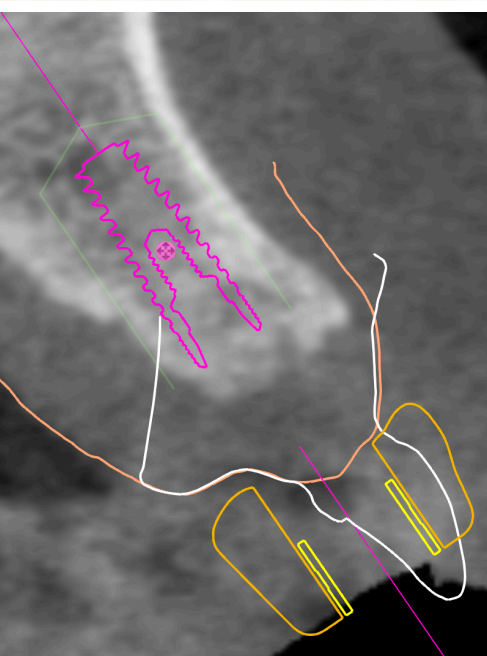
Methods

A 56-year-old male patient presented to the clinic with a missing tooth #10 and an associated buccal concavity. The “image-fusion” technique was utilized, in which a CBCT scan was matched with an intraoral scan and an extraoral scan of a diagnostic wax-up on a 3D-printed model. A tooth-supported surgical guide was then designed using implant planning software. The surgical approach consisted of an envelope incision, followed by full-thickness flap reflection and fully guided implant placement. A free gingival graft was harvested from the palate and Surgicel was applied for hemostasis. The graft was de-epithelialized and sutured to the buccal flap; tension-free primary closure was achieved.



Results and Conclusion

A combined conventional and digital workflow provided precise implant placement, and simultaneous CTG effectively corrected the buccal concavity and enhanced keratinized tissue width, contributing to optimal esthetics.



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