

The clinical outcomes of immediate versus delayed restoration procedures on immediate implants: a comparative cohort study for single-tooth replacement

ABSTRACT

In recent years, the placement of implants into fresh extraction sockets has become a more and more used procedure because immediate implant placement reduces surgery and treatment time, morbidity, and costs for the patient. As it has been demonstrated that bone remodeling occurs after tooth extraction and simultaneous implant placement, augmentation procedures have been developed for treatment of the peri-implant bone defects linked to the placement of implants into fresh extraction sockets.

Comparing the immediate and conventional restoration procedures for implants placed in fresh extraction sockets, the aim of this study was to evaluate the overall clinical outcomes and total costs and clinical treatment periods between the two above mentioned procedures. Implants were placed in fresh extraction sockets by means of a flapless technique and the peri-implant bone defect, between the implant surface and bone wall, was augmented with cortico-cancellous porcine bone particles (OsteoBiol® Apatos, Tecnos®, Giaveno, Italy). Subsequently, a resorbable membrane (OsteoBiol® Evolution, Tecnos®) was used to stabilize the graft.

The study aimed to evaluate the changes of marginal bone level, facial soft tissue (Δ FST), width of keratinized gingiva (Δ WKG), and the papilla index.

With reference to bone loss, the two procedures showed similar results, but in delayed restoration procedure a negative remodelling occurred from 4 to 12 months after implant placement. Moreover, for the delayed group a loss of the papillary soft tissues before restoration, followed by a reestablishment after restoration, was recorded.

CONCLUSIONS

As the results showed that the immediate restoration procedure seems to be more promising in terms of healing times and costs, the Authors concluded that *"immediate restoration of implants installed in fresh extraction sockets was at least as effective and safe as delayed restoration"*.

DEHISCENCES AND FENESTRATIONS

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ORIGINAL ARTICLE

Clinical Implant Dentistry and Related Research
2015 Dec;17(6):1114-26

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