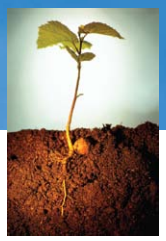

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Vestibular socket therapy with immediate implant placement for managing compromised fresh extraction sockets: A prospective single-arm clinical study

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ABSTRACT

In case of anterior teeth rehabilitation, especially due to aesthetic reasons, immediate implant placement has become the treatment of choice. In case of defective sockets, a novel technique, namely vestibular socket therapy (VST), was introduced, featuring a particulate bone graft filled in the defective socket, which is then sealed using a customised healing abutment. In order to confirm the promising results of this technique, the Authors conducted a single-arm clinical study on twenty-seven compromised fresh extraction sockets so to explore the changes in bone height, bone thickness, probing depth and pink esthetic score (PES), and investigate the effect of implant site and soft tissue grafting on these outcomes when using VST. After immediate implant placement, a 0.6-mm-thick flexible cortical membrane shield (OsteoBiol® *Lamina*®, Tecnoss®, Giaveno, Italy) of heterologous origin was hydrated, trimmed and tacked through the vestibular access incision until it extended 1.0 mm below the socket orifice. It was then stabilised to the apical bone using membrane tacks. The gap between the implant and the shield/labial plate was then filled with particulate bone graft (75% autogenous bone chips and 25% deproteinised bone mineral [DBBM] of equine origin). After 2 years, all implants recorded a 100% survival rate, with a statistically significant increase in bone height (0.93 mm, $P = 0.004$) and apical (0.12 mm, $P = 0.026$), midfacial (1.26 mm, $P < 0.001$) and crestal (0.86 mm, $P < 0.001$) bone thickness. The changes in pink esthetic score and probing depth were not significant.

CONCLUSIONS

Based on the results, the Authors concluded that "*combining immediate implant placement with VST to manage compromised fresh extraction sockets could provide promising radiographic, aesthetic and peri-implant results and minimise the treatment time and number of surgical procedures required*".

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