OsteoBiol® by Tecnoss

Vestibular socket therapy: a novel approach for implant placement in defective fresh extraction sockets with or without active socket infection (One-Arm Cohort Study)

A Th Elaskary[1]
Y Y Gaweesh[2]
M El Tantawi[3]
M A Maebed[4]

1 | Private Practice, New York University, New York City, New York, USA
2 | Oral Medicine and Periodontology, Alexandria University, Alexandria, Egypt
3 | Dental Public Health, Alexandria University, Alexandria, Egypt
4 | Oral Medicine and Periodontology, Cairo University, Cairo, Egypt

ABSTRACT

Implant rehabilitation in the anterior area presents an aesthetic challenge together with the indispensable requirement of long term results. Although immediate implant placement seems to be an appealing option, several authors consider it not suitable in case ideal anatomical conditions are not present. Consequently, a treatment protocol that can successfully manage defective sockets exhibiting acute and chronic infections while providing optimal regenerative and aesthetic results is lacking. In this study, vestibular socket therapy is proposed to manage sockets with a defective labial wall along with immediate implant placement, and the authors combined it with a 6-day protocol in sites where acute infection is present. Consequently, the aim of this study was to assess the radiographic, esthetic and periodontal outcomes after 1 year of implant placement in compromised fresh extraction sockets in the aesthetic zone using vestibular socket therapy.
Patients with one or more hopeless maxillary anterior teeth exhibiting a labial bone defect were recruited for a one-group cohort study with adequate palatal and apical bone that allows achievement of adequate implant primary stability along with absence of gingival recession. The vestibular socket therapy included immediate implant placement, vestibular incision and cortical bone shield stabilization with a membrane made of cortical bone of heterologous origin of 0.6-mm thickness (OsteoBiol® *Lamina,* Tecnoss®, Giaveno, Italy) . The socket gap between the implant and the shield was filled with particulate bone graft. Afterwards, the socket orifice was sealed with a customized healing abutment in one visit. Moreover, 6-day protocol of antimicrobial therapy for treating sockets with active infection was applied. All implants used in the study showed success, with a significant increase of bone height and bone thickness at the middle and crestal thirds (mean [SD] gain = 6.08 [3.07] mm, 1.65 [0.91] mm and 1.18 [1.51] mm). Also the mean pink esthetic score, the mean modified sulcus Bleeding Index and the mean peri-implant probing depth values were favourable.

CONCLUSIONS

The present study showed that vestibular socket therapy technique is a treatment protocol with predictable socket regeneration. It preserved original socket topography and allowed immediate implant placement in class II sockets, including infected cases. In actively infected sockets, the 6-day protocol allowed the placement of dental implants after few days.

ORIGINAL ARTICLE
The International Journal of Oral & Maxillofacial Implants
Jan-Feb 2021;36(1):146-153

Abstract author: Cristina Rodighiero, dental journalist, free publication, not for resale. Printed by Tecnoss® Dental s.r.l.