

Fixation in the Anterior Mandibular Fracture by Using Titanium Mini-Plates and Stainless Steel Mini-Plates: An Outcome Assessment Study

Yogesh Sharma, Prabhat Kumar Soni

Department of Oral & Maxillofacial Surgery, People's Dental Academy, Bhanpur, Bhopal - 462037

ABSTRACT

This study was conducted to compare the nature and biocompatibility titanium and stainless steel material, and to determine the effectiveness of titanium over the stainless steel mini plates in the management of anteriormandibular fracture. A total of 30 patients were included in the study with symphysis / para-symphysis fracture and were randomly allotted into two groups: Group A included anterior oblique/straight mandibular fracture patients treated using stainless steel mini-plates and screws. Group B, anterior oblique/straight mandibular fracture patient, were treated using titanium mini-plates and screws. The procedure was performed under general anesthesia. The fracture was exposed using a standard incision. The average adaptation time taken for stainless steel mini-plates was 8.42 minutes and 6.04 minutes for titanium mini-plates. Wound dehiscence in case of stainless steel mini-plate was observed in 4 patients from Group A (26.7%) while in the group B it was 0%. Titanium plates were more biocompatible when compared to stainless steel plates as evidenced by the incidence of wound dehiscence. In all cases the plates were found to be rigid, stable and satisfactory for use in the anterior mandibular region.