ABSTRACT

AIM

The purpose of this study is to evaluate the effectiveness of 3D plates in open reduction and internal fixation of subcondylar fractures.

MATERIALS AND METHODOLOGY

A Prospective clinical and radiological study was conducted on five patients reporting at the Department Of Oral And Maxillofacial Surgery, The Tamil Nadu Government Dental College and Hospital, Chennai. Patients with subcondylar fractures and who consented for surgery were included in the study. In all patients ORIF was done under general anaesthesia. In all patients Retromandibular transmassetric approach was used to expose the fracture site and the fracture was stabilized using 3 dimensional titanium trapezoidal plates. The following parameters such as mouth opening, mandibular deviation, occlusion, surgical accessibility, reduction of fracture, adaptability of plate, nerve weakness, wound infection, postoperative haematoma and scar were assessed.

Statistical analysis: SPSS version 16

RESULTS:

In all the patients there was improvement in mouth opening and occlusion in the immediate postoperative period obviating the need for IMF. The accessibility to the surgical site ranged from good to excellent. The reduction of fractured fragments were excellent in 60 % of patients and good in 40 %.In one patient there was transient weakness of marginal mandibular nerve which recovered by 3months postoperatively and one patient had wound infection which subsided within the first postoperative week. None of the patients had osteosynthesis device failure during the 6 months follow up period.

CONCLUSION

Trapezoidal condylar plates [3D] are effective in treating subcondylar fractures of mandible both in terms of surgical accessibility and stability.

KEY WORDS

3D plates, subcondylar fractures, occlusal derangement, reduction of fracture.