The Osteosynthesis of Unstable Fractures of the Distal Clavicle with Hook Plate: Is it a Solution or Trouble?

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Objectives: The conservative treatment of unstable fractures of the distal clavicle associated with higher nonunion rates. Although many treatment modalities have been described for these unstable fractures, there isn't a golden standard one. Although osteosynthesis of the fractures with hook plate known a treatment option its special problems regarded the design of the implant. Aim of the study: To show f effectiveness of the hook plate osteosynthesis in treatment of unstable fractures of the distal clavicle with early removal of the implant to prevent possible complications.

Methods: Between July 2011 and September 2013, seven patients with unstable fractures of the distal clavicle were treated with open reduction and internal fixation with hook plate. The mean age of the patients was 36 (range: 21-58) and there were two female and 5 male. Routine plate removal was planned at six months after the index surgery and the patients were informed for this second surgery. All fractures were unilateral and 5 in dominant extremity. Routine follow up were done after two, six and 18 weeks after the index surgery. The healing of the fracture was evaluated with radiological and clinical examinations. The Constant scoring system was used for functional evaluation of the patients.

Results: All fractures healed without any mechanical problems related to the plate. The average follow-up of the patients were 22 months (range: 8 - 35). After the complete healing all plates were removed. The mean Constant score was 93 (rang 82 to 98 points) at the final follow up of the patients.

Conclusion: The osteosynthesis of the unstable fractures of the distal clavicle with hook plate is seems to be an alternative and effective option for surgical treatment. To prevent implant related mechanical problems, we advise to remove the plate after the healing of the fracture as a routine manner.

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