

Results of Fixation of Proximal Humerus Fracture with Locking Plates.

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Abstract: Anatomical Locking Plate fixation for Proximal Humerus fracture is standard procedure in orthopaedic trauma management. We performed 32 consecutive cases in which ORIF done using delto-pectoral approach and found excellent results in terms of quality of fixation and early R.O.M. and rehabilitation in these complex fractures.

Keywords: PHILOS Displaced Proximal Humeral Fractures.

I. Introduction

The management of displaced proximal humerus fractures is done by many methods. ORIF is difficult, especially in old and osteoporotic bones, with fear of loss of fixation. Since last twelve years, anatomical locked plating is becoming standard choice for fixation of these complex fractures.

II. Methods

32 consecutive proximal humerus displaced fractures have been operated since June 2011(5Yrs) in orthopaedic department of N.M.C.H., Jamuar; and our Oxygen Trauma and Multispeciality Hospital, at Patna, Bihar. Only Neer's type 2, 3 and 4 had been taken for consideration for this study. Some fractures were associated with subluxation /dislocation .Age of the patients in this study was 18 years to 68 years, with mean age was 48 years. Delto-Pectoral approach was used for open reduction and internal fixation in 27 patients and deltoid splitting direct lateral approach in remaining 5 patients requiring minimal incision. After initial reduction with c.c.screws, PHILOS was applied. In all cases reduction was assessed by Image Intesifier intra-operatively. Bone graft was used in 2 patients. Evaluation was done using Constant score at 6 months, 12 months and 3 years.



Segmental fracture fixed with long Anatomical locking plate. Well united in just two months With useful R.O.M.



Widely displaced fracture proximal with multiple ribs fracture with hemopneumothorax, fixed with Locking plate.

III. Results

Union was achieved in 30 patients, which is 94%. One was lost in follow up. One had re-injury and re-fracture which was managed accordingly. Range of motion active assistive exercises were explained and encouraged after subsidence of post operative pain. Union were assessed clinico- radiologically . Average external rotation was 40 degree [30 to 60 degrees]. Abduction was initially upto 100 degrees, with gradually improved with physio. Internal rotation was till opposite axilla level in 28 patients. There were 1 mal union of greater tuberosity and 1 varus collapse ,screw cut out and partial AVN [2 in all cases]. 27 patients were satisfied as they achieved their near pre-injury status .

IV. Discussion:

There are many methods of treatment of proximal humeral fractures, including k-wire fixation, JESS, plating, Plasters, strapping etc., with associated numerous complications. Conservative treatment led to unsatisfactory results due to high rates of malunion, stiffness and deformity with non-union. And JESS and other types of k-wires fixation led to secondary loss of fixation in early post op period in attempt of early mobilization as published in many papers earlier.

V. Conclusions

Locked plate fixation is an excellent innovation to the armamentarium of existing of implants. It is strong and anatomical and interferes less with shoulder movements. Screw holes in different directions allowed better purchase of all fragments. IT HAS HIGH UNION RATES AND OVERALL SATISFACTION.

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