

## International Journal of Orthopaedics Sciences

E-ISSN: 2395-1958 P-ISSN: 2706-6630 IJOS 2019; 5(4): 742-747 © 2019 IJOS www.orthopaper.com Received: 09-08-2019 Accepted: 13-09-2019

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### Surgical management of diaphyseal fractures of the humerus with plate osteosynthesis on anteromedial surface

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#### DOI: https://doi.org/10.22271/ortho.2019.v5.i4m.1762

#### Abstract

**Background:** Humeral shaft fractures represent approximately 1-5 % of all fractures. Non-operative management of humeral shaft fractures is the mainstay of treatment with some drawbacks. The surgical options for a closed humerus diaphyseal fracture are plate osteosynthesis and intramedullary nailing, the previous being gold standard for last four decades. The aim of this study is to evaluate the union rates and functional outcome of anteromedial plate fixation in diaphyseal fractures of the humerus.

**Materials and Methods:** 56 patients treated in a tertiary care medical teaching hospital between June 2015 and May 2019 were enrolled in the study. The humerus was approached by Henry's approach, fractures were reduced and fixed with 4.5 mm narrow DCP or LCP on the anteromedial surface. All patients were followed up for minimum of 6 months. Modified Stewart and Hundley scoring was used to grade the outcome.

**Results:** Out of 56 patients 41 were males and 15 females, with mean age of 36.5 years. Road traffic accidents were the most common mechanism of injury. The most common fracture pattern was A3 followed by A2. The average time taken for fracture union was 13.8 weeks. 44 patients had excellent to good functional outcome. Three patients had delayed union and one had non-union. None of the patients had iatrogenic radial nerve injury.

**Conclusion:** Plating on anteromedial surface using an anterolateral approach is very good technique for management of humerus shaft fractures with good functional outcome and lesser incidence of radial nerve injury.

Keywords: Humerus shaft fractures, anteromedial surface, modified stewart and hundley scoring