



Outcome of Proximal Humerus Fracture

Vinoth Kumar ^a and J. Suresh Kumar ^{a*}

^a *Department of Orthopaedics, Sree Balaji Medical College and Hospital, Chromepet, Chennai, 600044, India.*

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JPRI/2022/v34i34B36154

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/78100>

Short Research Article

Received 15 February 2022

Accepted 25 April 2022

Published 26 April 2022

ABSTRACT

Introduction: Proximal fractures of the humerus account for about 4 to 5% of all fractures. They are the most common fractures in elderly population. Treatment of unstable, displaced, and comminuted fractures of the proximal humerus remains challenging.

Objectives: The present study is undertaken to evaluate the functional outcome of proximal humerus fractures treated by locking compression plate in 3 patients. **Materials and methods:** Prospective study was done involving 3 adult patients with proximal humerus fractures admitted. **Results:** In our series, the majority of the patients were 40 to 50 years of age. After reduction and application of PHILOS plating, patient symptomatically improved after series follow up with physio and mobilization was done **Conclusion:** In conclusion, securing density plate is an advantageous implant in proximal humerus fractures due to angular stability, which allows their early mobilization.

Keywords: *Locking compression plate; open reduction and internal fixation; proximal humerus fractures.*

1. INTRODUCTION

Proximal humerus fracture is most commonly seen in people due to violent trauma at the proximal site of humerus [1]. Most of these

fractures are due to fall and sustained injury directly to the proximal humerus [2]. Radial nerve injury and brachial artery injury are sometimes encountered due to the trauma. Proximal humeral fractures are powerfully connected to osteoporosis and shared between older patients.

*Corresponding author: E-mail: jothilingamsuresh@gmail.com;

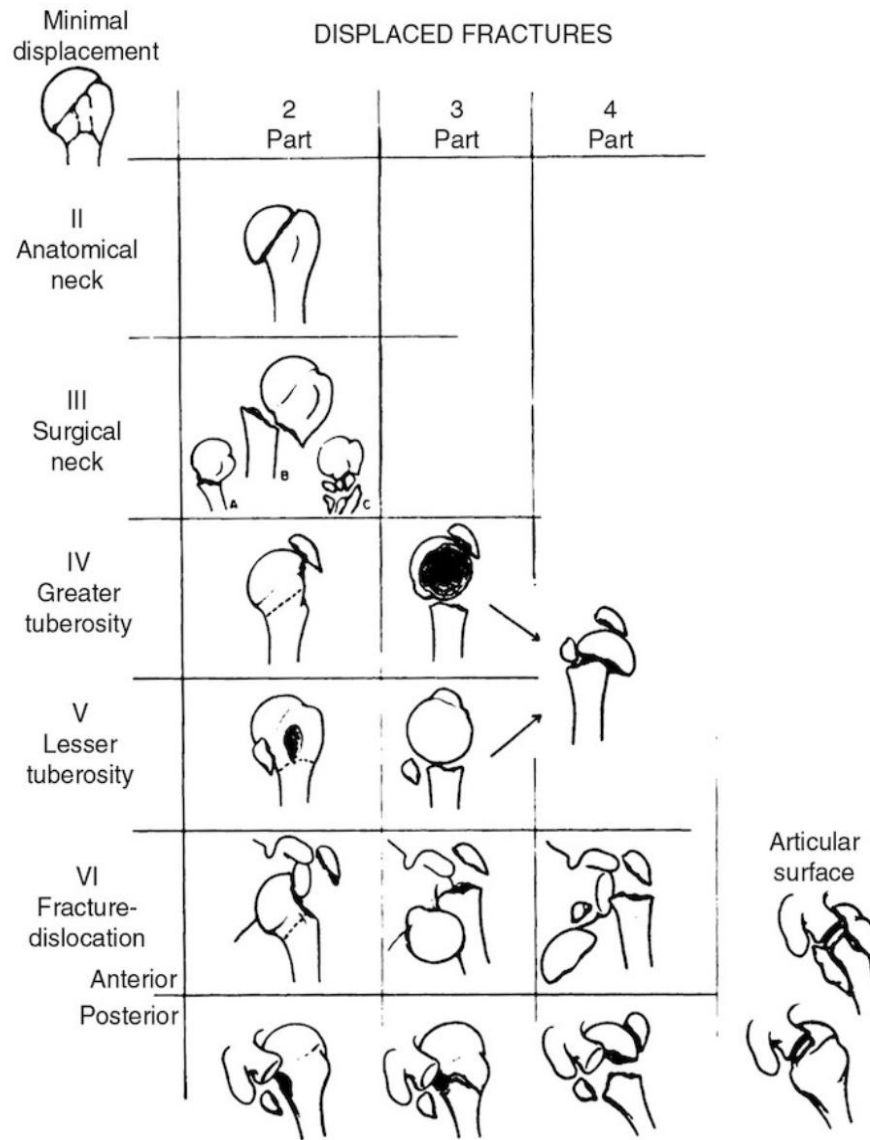


Fig. 1. Displaced Fracture

The aim of treatment is to decrease pain and regain function. Patient comorbidity and poor bone excellence appear to influence the complete outcome, as well as deteriorating changes in the rotator cuff. The organizational excellence of scientific educations has factually been low, but inside the previous periods randomized scientific educations must gained ground, which confidently authorities an era of evidence-based and tested treatment algorithms [3-8].

1.1 Classification

Proximal humerus fractures are classified on NEER classification based on the truma.

- TYPE 1- 1 PART FRACTURE
- TYPE 2- 2 PART FRACTURE
- TYPE 3- 3 PART FRACTURE
- TYPE 4- 4 PART FRACTURE

2. METHODS

There are 3 patients with an age group of 40 to 50 years of age. Fracture are classified based on neer and treatment is then processed. Out of these 2 where 3-part fracture and treatment followed up was PHILOS PLATING. Patient was comfortable. Peripheral nerve examinations were done and intact and patient symptomatically improved.

2.1 Non-operative Treatment

In greatest cases non-operative managing is used since the shape of the fracture is stable and it is likely to heal with a good outcome.

3. RESULTS

After reduction and application of PHILOS plating, patient sympatomatically improved after series follow up with physio and mobilization was done. ORIF with PHILOS PLATING is the best modality of treatment for proximal humerus fracture. Then patient symptomatically improved then discharged and asked for regular follow up.

4. DISCUSSION

Treatment of proximal humerus fracture is very important or else may lead to movement abnormalities with nerve and artery injuries may be present. This study is done in such a way that all the patient treated well with the treatment of choice and patient was symptomatically improved. After this patient mobilized well and started doing regular activities. The appropriate type of treatment, either operative or nonoperative in the elderly, low-demand patient, also remains unsolved [9] Our study is in agreement with other studies, with more than 75% patients having excellent to satisfactory results [10].

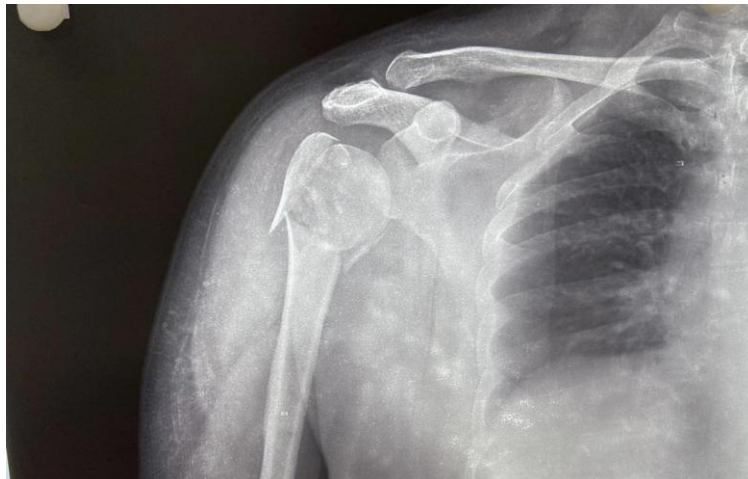


Fig. 2. X-ray image

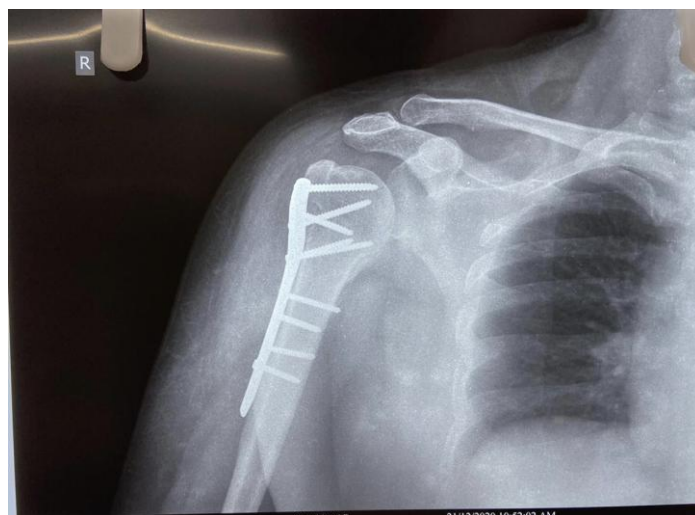


Fig. 3. Proximal humerus fracture

5. CONCLUSION

The present study was done to assess functional outcome and difficulty ensuing surgical management of proximal humerus fracture by locking compression plate.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Chen CT, Lin SJ, Kuo LT, Chen TH, Hsu WH, Chen CL, Yu PA, Peng KT, Tsai YH. Effect of chronic kidney disease on outcomes following proximal humerus fragility fracture surgery in diabetic patients: A nationwide population-based cohort study. *PLoS one*. 2021;16(10): e0258393.
2. Audigé L, Brorson S, Durchholz H, Lambert S, Moro F, Joeris A. Core set of unfavorable events of proximal humerus fracture treatment defined by an international Delphi consensus process. *BMC musculoskeletal Disorders*. 2021; 22(1):1-8.
3. Slobogean GP, Johal H, Lefavre KA, MacIntyre NJ, Sprague S, Scott T, Guy P, Crompton PA, McKee M, Bhandari M. A scoping review of the proximal humerus fracture literature. *BMC musculoskeletal disorders*. 2015;16(1): 1-0.
4. Handoll HH, Brorson S. Interventions for treating proximal humeral fractures in adults. *Cochrane Database of Systematic Reviews*. 2015(11).
5. Kannus P, Niemi S, Sievänen H, Parkkari J. Stabilized incidence in proximal humeral fractures of elderly women: nationwide statistics from Finland in 1970–2015. *Journals of Gerontology Series A: Biomedical Sciences and Medical Sciences*. 2017;72(10):1390-1393.
6. Brorson S. Fractures of the proximal humerus: history, classification, and management. *Acta Orthopaedica*. 2013;84(sup351):1-32.
7. Launonen AP, Sumrein BO, Reito A, Lepola V, Paloneva J, Jonsson KB, Wolf O, Ström P, Berg HE, Felländer-Tsai L, Jansson KÅ. Operative versus non-operative treatment for 2-part proximal humerus fracture: A multicenter randomized controlled trial. *PLoS Medicine*. 2019;16(7):e1002855.
8. Brorson S, Alispahic N, Bahrs C, Joeris A, Steinitz A, Audigé L. Complications after non-surgical management of proximal humeral fractures: a systematic review of terms and definitions. *BMC musculoskeletal disorders*. 2019;20(1): 1-7.
9. Björkenheim JM, Pajarinen J, Savolainen V. Internal fixation of proximal humeral fractures with a locking compression plate. *Acta Orthop Scand*. 2004;75(6):741-745.
10. Owsley KC, Gorczyca JT. Fracture displacement and screw cutout after open reduction and locked plate fixation of proximal humeral fracture. *J Bone Joint Surg Am* 2008;90(2): 233-240.

© 2022 Kumar and Kumar; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:

<https://www.sdiarticle5.com/review-history/78100>