|| ISSN(online): 2589-8698 || ISSN(print): 2589-868X ||
International Journal of Medical and Biomedical Studies
Available Online at www.ijmbs.info
NLM (National Library of Medicine ID: 101738825)
Index Copernicus Value 2019: 79.34
Original Research Article
Volume 5, Issue 1; January: 2021; Page No. 360-362

TO ASSESS OUTCOME OF PROXIMAL HUMERUS INTERLOCKING OSTEOSYNTHESIS PLATING FOR TREATMENT OF PROXIMAL HUMERUS FRACTURES

Dr. Abhishek Kalantri[1] (Associate Professor) **& Dr. Puneet Maheshwari**[2] (Asst. Professor)

[1]Dept. of Orthopaedics, Index Medical College Hospital & Research Centre, Indore, M.P.
[2]Dept. of Orthopaedics, Amaltas Institute of Medical Sciences, Dewas, M.P.

Article Info: Received 07 December 2020; Accepted 11 January 2021
DOI: https://doi.org/10.32553/ijmbs.v5i1.1759
Corresponding author: Dr. Puneet Maheshwari
Conflict of interest: No conflict of interest.

Abstract

Background & Method: Patients with proximal humerus fracture treated with PHILOS plate in Department of Orthopaedics, Amaltas Institute of Medical Sciences, Dewas, M.P. Total of 25 Patients were included and shifted to the ward after initial temporary immobilization with universal shoulder immobilizer or POP U slab. All routine investigations were done with complete medical and anaesthetic fitness for surgery. All patients were treated by open reduction and internal fixation by PHILOS plating.

Result: Age variation in series was from 18 to 70 years. Proximal humerus Fracture was found to have high incidence in 51 to 70 years age group. 25 patients, treated by PHILOS plating most common complication was varus malunion and least common complication was implant failure.

Conclusion: Practical Outcome is better and prior in Younger Patients. In spite of the fact that result is additionally acceptable in older. Age and break setup assume a critical part in the clinical result of these cracks after inward obsession. Complexities might be identified with unseemly careful method or break calculation. Those identified with careful strategy are preventable and incorporate inappropriate crack decrease, screw position, ill-advised plate situation prompting impingement, inordinate delicate tissue depriving of the break pieces inclining to avascular rot and periodic neurovascular injury.

Keywords: fractures, humerus, PHILOS & plating.
Study Designed: Observational Study.

Introduction

Proximal humerus fractures are the after effect of a backhanded power, for example, a fall onto the outstretched arm as opposed to a hard impact to the shoulder[1]. The starting point of a proximal humerus break is because of a blend of variables, which incorporate moderately osteoporotic bone (in the old), direct contact against the adjoining acromion and glenoid edge, and intense draw of the rotator sleeve muscles and extraneous muscles, for example, the pectoralis major[2].

Late necrosis of the humeral head happened in two cases, both with 4-section breaks. We hence accept that 3-section cracks, in which both decrease and stable osteosynthesis are simpler, show positive anticipation and ought to be plainly recognized from 4-section ones during assessments[3]. The deltopectoral approach offers great openness and is particularly suggested in 4-section breaks, likewise in light of the fact that it gives a decent perspective on the lesser tubercle. The osteosynthesis should be steady if early assembly of the shoulder and legitimate recuperation of scope of movement are to be accomplished. Just as decrease and adjustment of the tubercles, it is likewise essential to reestablish the neck/shaft point and settle it with diagonal screws fitting the plate to evade varus malposition. They inferred that the osteosynthesis should be steady if early assembly of the shoulder and proper recovery of range of motion are to be achieved[4].

Material & Method

Patients with proximal humerus fracture treated with PHILOS plate in Department of Orthopaedics, Amaltas Institute of Medical Sciences, Dewas, M.P. from Dec 2018 to Nov 2019. Total of 25 Patients were included and shifted to the ward after initial temporary immobilization with universal shoulder immobilizer or POP U slab. All routine investigations were done with complete medical and anaesthetic fitness for surgery. All patients were treated by open reduction and internal fixation by PHILOS plating.

Inclusion Criteria

1. All skeletal mature patient (>18 years age).

2. Any patient with two part, three part, four part proximal humerus fracture (as per Neer's classification).

Exclusion Criteria

1. Fracture in patient <18 years of age.

2. Open fracture of proximal humerus.

3. Patient having fracture in clavicle or any other part of humerus in same limb.

Results

Table 1: Age distribution

Age variation in series was from 18 to 70 years. Proximal humerus Fracture was found to have high incidence in 51 to 70 years age group**.**

Age incidence

Age group (years)	Number of patients	Percentage
18-30	03	12%
31-40	04	16%
41-50	05	20%
51-60	09	36%
61-70	04	16%

Table 2: Right side was involved in more patients. 17 patients had right side involved 1 patient had both the side involved.

Side	Number of patients	Percentage
Right	14	56%
Left	11	44%

Table 3: COMPLICATION

25 patients, treated by PHILOS plating most common complication was varus malunion and least common complication was implant failure.

Complications	No. Of Patients	Percentage
varus Malunion	3	10%
Joint stiffness	2	6.7
Primary and secondary screw perforations	2	6.7%
Avascular necrosis of humeral head	2	6.7%
Sub acromial impingement	1	3.3%
Infection	1	3.3%
Implant failure(Pull out of screws, implant breakage)	Nil	Nil
Non-union	Nil	Nil

Discussion

In our investigation, the mean Constant score for 4-section cracks was 65.5 which were sub-par when contrasted with 2-section and 3-section breaks (81.8 and 70.7 separately). Our outcome was practically identical to the one imminent examination directed by Aggarwal et al. [5] in which the mean Constant score for 4-section breaks was fundamentally substandard compared to different sorts. The consequences of two examinations showed a benefit in utilitarian results preferring shoulder hemiarthroplasty contrasted and ORIF with a securing plate 4-section break [6]. These outcomes are normal as these cracks are more intricate and open decrease and inward obsession is harder.

We discovered distinction in result between patients old enough gathering not exactly or over 50 years old. Patients under 50 years old gathering showed better reaction. Rizwan Shahid et al.[7] (2008) presumed that PHILOS plate were similarly acceptable altogether the patients yet the useful result was better in more youthful patients. Anyway Rajinder Singh Gaheer[8] (2010) found No distinctions in the utilitarian results of patients more youthful and more established than 65 years.

Post operatively, different inconveniences were noticed. A varus malunion was seen in 3 patients (10%) and was discovered to be the commonest complexity in our examination. Varus malunion was found in five out of 47 patients in a single report. These patients had been fixed in a varus position and had an inadequate average buttressing prompting helpless result. One patient had related avascular putrefaction of humerus head prompting helpless result. We didn't notice any valgus malunion in our examination. We in this manner found that a varus malalignment was causing loss of obsession with helpless result and should be stayed away from intra-operatively at any expense. In our examination we endeavored to accomplish right anatomic decrease of the sections yet had a high level of patients with this intricacy.

Inside our patient populace, screw hole happened in 2 patients (6.7%). Thanasas et al. [9] showed a screw cut-out pace of 11.6% in their survey of 791 patients. These past examinations concur that screw hole of fixed-point inserts has supplanted the inconveniences of auxiliary uprooting and embed releasing as the principle embed related intricacy of non-fixed-point inserts.

Conclusion

Practical Outcome is better and prior in Younger Patients. In spite of the fact that result is additionally acceptable in older. Age and break setup assume a critical part in the clinical result of these cracks after inward obsession. Complexities might be identified with unseemly careful method or break calculation. Those identified with careful strategy are preventable and incorporate inappropriate crack decrease, screw position, ill-advised plate situation prompting impingement, inordinate delicate tissue depriving of the break pieces inclining to avascular rot and periodic neurovascular injury.

References

1. Alexander E. Handschin, Markus Cardell Et al “Funtional results of angular- stable plate fixationin displaced proximal humeral fractures” Injury, int J.care Injured 2008 39,306-33
2. Kenneth A Egol, MD, Crispin C. Ong et al “Early complication in proximal humerus fractures treated with locked plates”. J Orthop Trauma. 2008;22(3):159–64.
3. Korkmaz MF, Aksu N, Gogus A, Debre M, Kara AN, Isiklar ZU. The results of internal fixation of proximal humeral fractures with the PHILOS locking plate. Acta Orthop Traumatol Turc.2008;42(2):97–105.
4. Kilic B, Uysal M, Cinar BM, Ozkoc G, Demirors H, Akpinar S. Early results of treatment of proximal

humerus fractures with the PHILOS locking plate. Acta Orthop Traumatol Turc. 2008;42(3):149–53.

5. Aggarwal S, Bali K, Dhillon MS, Kumar V, Mootha AK. Displaced proximal humeral fractures: An Indian experience with locking plates. J OrthopSurg Res 2010;5:60.
6. Sproul RC, Iyengar JJ, Devcic Z, Feeley BT. A systematic review of locking plate fixation of proximal humerus fractures. Injury. 2011;42(4):408-13.
7. Rizwan Shahid, Abid M Ushtaq, Julian N Orthover, Mohammad Maqsood. Outcome of proximal humerus fractures treated by PHILOS plate internal fixation Experience of a District General Hospital. ActaOrthop. Belg. , 2008, 74 , 602-608.
8. Gaheer RS, Hawkins A.Fixation of 3- and 4-part proximal humerus fractures using the PHILOS plate: mid-term results. Orthopedics. 2010 Sep 7;33(9):671.
9. Thanasas C, Kontakis G, Angoules A, Limb D, Giannoudis P. Treatment of proximal humerus fractures with locking plates: a systematic review. J Shoulder Elbow Surg. 2009;18(6):837-44.