

# **FUNCTIONAL OUTCOME OF LOCKING PLATES IN PROXIMAL HUMERAL FRACTURES: BASED ON AGE AND FRACTURE PATTERN**

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## **ABSTRACT**

### **BACKGROUND**

Proximal humerus fractures accounts for 4-5% of all fractures. This is the third most common fracture in the elderly population. Surgical treatment is advised for displaced proximal humerus fractures. This study was done to evaluate the functional outcome of proximal humerus fractures operated with locking plates and to evaluate any significant difference of outcome present between age(< 60 years and > 60 years) and fracture pattern(AO Type A, B, C).

### **MATERIALS AND METHODS**

This is a Prospective study conducted at Govt. Kilpauk Medical College. 22 cases of proximal humerus fracture cases were randomly selected and operated with proximal humerus locking plates. Post operatively functional outcome was evaluated with Constant Murley score and radiological followup.

### **RESULTS**

In our study 12 cases were < 60 years and 10 cases were > 60 years .The mean constant score was 86.75 and 67.1 for < 60 and > 60 years respectively and it was statistically significant(p value

0.000). There were 6 patients type A, 10 in type B and 6 patients in type C. The difference in the functional outcome of three types was statistically significant with a p value of 0.048. The mean Constant score of our study was 77.8 which was concurrent with previous similar studies.

## **CONCLUSION**

Proximal Humerus Locking Plate is the implant of choice for treating displaced proximal humerus fractures. This Variable angle locking plate provides stable internal fixation, allows early mobilisation and prevents secondary loss of reduction and hence we recommend the use of proximal humerus locking plate in osteoporotic fractures. Anatomic restoration of tuberosities should be achieved for optimal functional outcome postoperatively. The use of Calcar screws prevents secondary loss of reduction by providing inferomedial support. The functional outcome was decreased in elderly individuals when compared to younger individuals. More complex initial fracture patterns have decreased functional outcome postoperatively, hence adequate stable fixation and appropriate physiotherapy and rehabilitation protocols should be followed to achieve the optimal functional demand of the patient.

## **KEY WORDS**

Proximal humerus fractures, Proximal humerus locking plates , Constant Murley Score, Calcar Screws