INTRODUCTION
Proximal humeral fractures account for approximately five percent of all fractures presenting to the orthopaedic surgeon.(1) It is estimated that only twenty percent of these patients require surgical intervention.(2) The indications for fixing such a fracture depend on the fracture pattern, quality of bone and age & activity level of the patient. Surgical treatment is usually preferred for displaced fractures. Various methods have been introduced including the use of per-cutaneous Kirschner's wires, plates, intra-medullary nails and arthroplasty.(3) The goal of such treatment is to achieve near anatomical reduction and stabilization so as to achieve early mobilization. However, literature shows complication rate following surgical treatment to be nearly fifty percent or even higher.(4,5) Several complications have been reported such as cut-out or back-out of screws & plates, non-union, avascular necrosis, nail migration, rotator cuff impairments and impingement syndrome. In order to decrease the incidence of complications, particularly fixation failure and loss of stability and to enable early post operative mobilization, plating techniques using anatomical locking plates have been developed. The aim of this study was to evaluate the clinical results of locking anatomical plates in proximal humerus fractures and to analyze the potential complications if any, during the early period of follow-up.

METHODOLOGY
The study was conducted at a tertiary care hospital between June 2015 and May 2016. Twenty patients (16M, 4F) with displaced proximal humerus fractures were included in the study. Fractures were classified using Neer's classification.(6,7) Inclusion criteria: All adult patients (age >18 years ) with two/three part fractures of proximal humerus.

Exclusion criteria: i) Intra-articular comminution, ii) pathological fractures, iii) open fractures and iv) associated injuries in the same limb affecting final functional outcome.
compromised when assessed in total for the study, individual case assessment showed that shoulder pain and loss of movements were proportionately lower in fractures properly reduced and fixed. Sub-acromial impingement was not a major problem in our study because of prior knowledge of this problem from the available literature. Our results corresponding with other studies in literature can probably be attributed to the minimum dissection required for fracture fixation with this system.

There have been different methods to evaluate outcome of fractures of proximal humerus. Although all outcome assessment systems have their own advantages, the Constant and Murley Scoring system is simple and easy to use which also includes measurement of abduction strength which is important for good functional outcome in these fractures. As per this scoring system, we had 1 poor, 2 fair, 7 good and 10 excellent results. Lesser scores were constantly seen with fractures that were fixed in varus and in non anatomical fixation of tuberosities. In a series of 20 consecutive patients, Koukakis et al. showed favorable early results with surgical treatment of proximal humeral fractures using the anatomical locking plate. After a mean follow up of 16 months, the mean Constant score was 76.1. The results did not differ with respect to age.

Although our study showed favorable results using anatomically locked plates for proximal humerus, any inference from it should be viewed considering its limitations like the small sample size, the short duration of study, inclusion of limited variety of fractures and not referencing our outcomes with confounding factors like age, quality of bone, and status of rotator cuff etc.

REFERENCES

DISCUSSION
Modern advances in orthopaedic surgery have expanded the indications of surgical treatment of proximal humerus fractures; simultaneously the complications have also been minimized. Conservative treatment except for the most undisplaced fractures is almost outdated. Kristiansen and Christensen have reported a high incidence of fixation failure following use of T-buttress plates in fixation of proximal humeral fractures. The anatomical plate with locking screws used in this study combines the principles of fixation with a conventional plate with those of locking screws. The benefits of this implant are that it gives enhanced purchase in osteopenic bone, there is no loss of reduction or varus/vagus angulations, the screws locking into the plate provide angular and axial stability of the construct and it is a low-profile plate.

During this study, we felt that the main challenge in surgical management of proximal humerus fractures is achieving anatomical reduction. The anatomical locking plate limits further manipulation of reduction, once initial reduction is achieved across the fracture. Identifying and holding of tuberosities with non absorbable suture material prior to placement of plate is pertinent to achieve an acceptable reduction that gives good functional outcome. Few patients in whom fractures were fixed in varus showed persistent low outcome score till final follow up.

None of the fractures in our study showed a deviation in the expected progress to union. Although shoulder range of movements were