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## A study of management of intertrochanteric fractures of hip with dynamic hip screw

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### Abstract

Intertrochanteric fractures are common in old age group, but it is not uncommon in younger age group. These fractures unite readily with conservative line of treatment. Though trochanteric fractures unite without surgical intervention, mal union with coxa vara deformity resulting in shortening of limb and limp are commonly seen. This study is an effort to analyze the results of dynamic hip screw in the management of intertrochanteric fracture.

**Keywords:** Management, intertrochanteric, fracture, hip, screw

### Introduction

Intertrochanteric fractures are common in old age group, but it is not uncommon in younger age group. These fractures unite readily with conservative line of treatment. Though trochanteric fractures unite without surgical intervention, mal union with coxa vara deformity resulting in shortening of limb and limp are commonly seen [1]. Until operative treatment involving the use of various implants was introduced in the 1950s, hip fractures were managed using conservative methods based on traction and bedrest [2-6]. Various operative procedures with different implants have been described for the treatment of intertrochanteric fractures [7, 8]. The primary goal of treatment has to be early mobilization to avoid secondary complications. This study is an effort to analyze the results of dynamic hip screw in the management of intertrochanteric fracture.

### Aims and Objectives

Evaluate the management of intratrochanter fractures of hip with dynamic screw.

### Materials and Methods

This study was done in the Department of Orthopedics, Srinivas Institute of Medical Sciences, Mangalore.

This study was done from Dec 2019 to Nov 2020.

The study was done in 30 patients who were admitted with intertrochanteric fractures.

The patients were operated and the results of the operation were measured for the satisfaction.

### Inclusion Criteria

Intertrochanteric fractures

### Exclusion Criteria

Any other bone disease

People on immunosuppressant drugs.

### Results

**Table 1:** Age

Total subjects	Mean Age
30	61.27 years

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**Table 2: Sex Distribution**

Males	Females
12	18

**Table 3: Boyd and Griffins classification**

Grade 1	10%
Grade 2	50%
Grade 3	30%
Grade 4	10%

All fractures were classified according to Boyd and Griffin's classification and all the patients underwent internal fixation.

**Table 4: Stable vs unstable fracture**

Stable	07
Unstable	23

Two techniques were followed

- 1) Anatomical reduction-21 patients
- 2) Dimon Hugston (D&H) reduction-9 patients,

The average hospital stay in this study was 19 days.

**Table 5: Kyle's Criteria.**

Excellent	04
Good	21
Fair	03
Poor	02

5 Excellent results were seen in 10 patients (25%), good results were seen in 20 patients (50%), fair results were seen in 6 patients (15%), poor results were seen in 4 patients (10%).

## Discussion

Marty *et al.* [8] in their study Quality adjusted life years and cost of several type hip fracture with various treatment options showed that operative treatment proved cost effective than conservative treatment for extra capsular fractures. In this study all cases were operated. Dolk *et al.* [9] in his study found no difference in mortality and hospital stay between those operated within 8hrs of admission and those treated within 48hrs of admission, indicating that there was no need to operate on those as emergencies. Gustilo *et al.* [10] reported an infection rate of 3 to 5% without preoperative prophylactic antibiotics. The goal of surgical treatment is strong stable fixation of the fragments; Kaufer *et al.* [11] has listed the following variables that determines the strength of the fracture fragment and implant assembly 1. Bone quality 2. Fragment geometry 3. Reduction 4. Implant design and 5. Implant placement. According to Parke *et al.* [8] screw should be placed centrally or inferiorly on antero posterior view and centrally on lateral view. In this study the same principle of placement of screw was followed. Cutting out of DHS related to its position according to Jensen *et al.* [12] is 53% and according to Davis *et al.* [11] is 16.8%, in this study there was one cut through, (2.5%) for which implant removal was carried out. Reduction of the intertrochanteric fracture may be carried out either by open or closed means. In either circumstance the objective is to achieve a stable reduction, be it anatomical or non-anatomical in configuration. If the fracture is severely comminuted, anatomical reduction even by open reduction may be difficult, in such circumstances non-anatomic but stable reduction obtained by elective medial

displacement of the femoral shaft has been used by Dimon Hugston *et al.* [13] to achieve stability followed by internal rotation.

## Conclusion

The results are very clear. This is the method of choice and will be very effective in many of the cases. Other conjunct factors should be monitored for better results.

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