



## RESEARCH ARTICLE

### GREATER TROCHANTERIC FRACTURE IN STABLE INTERTROCHENTRIC FRACTURE

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#### Abstract

**Background** : stable intertrochanteric femur with displaced greater trochanter is uncommon fracture pattern . intertrochanteric femur fractures are associated with high morbidity and mortality , affecting both genders ,with different complexity

**Case report** ; in our case report we have 75 years old male patient with history of fall sustained intertrochanteric femur fracture with displaced greater trochanter treated with fixation of both fracture element Using dynamic hip screw (DHS) with trochanteric stabilizing plate (TSP) in addition to tension band fixing the greater trochanter

**Discussion** : different pattern of intertrochanteric femur fracture require thorough planing for optimum management .intertrochanteric femur fracture with displaced greater trochanter need further research to identify the best management option specially regard of functionality.

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#### Introduction:-

Intertrochanteric fractures are defined as extra-capsular fractures of the proximal femur that occur between the greater and lesser trochanter.

The greater trochanter serves as an insertion site for the gluteus medius, gluteus minimus, obturator internus, piriformis, and site of origin for the vastus lateralis. [6]

Intertrochanteric (IT) femur fractures are a very common injury seen in the elderly.[1]

Predisposing patient to morbidity and increased risk of mortality .managing such fracture surgically aimed to reduce patient mortality and morbidity by restoring hip functionality and mobility [2]

Isolated GT fracture with no evidence of intertrochanteric extension by MRI is treated conservatively in vast majority of patient with noticed difference in strength [3]

In other hand intertrochanteric extension of such fracture raise the need of surgical management

#### Case presentation

Case report of patient with 75 years old male patient known history of diabetes ,hypertension . patient Presented to ER , with typical history of fall down ( slipped in wet surface 1 day prior to presentation) complaining of sever right hip pain and inability to bear weight

#### Examination

vitaly stable patient ,oriented and alert.

Right lower limb in external rotation slight shortening further examination were unremarkable xray of the pelvis and hip showed : intertrochanteric femur fracture and displaced greater trochanteric (GT).



figure (1) :-



figure (2):-

### Management

Patient was optimized medically , And underwent dynamic hip screw (dhs) fixation displaced GT had good bone quality and intact attachment of gluteus medias and Maximus

We elected to go for dhs+tsp and tension band fixation . operation went smoothly with no complication intra-operatively.

### Follow up

Post operatively were uneventful patient was followed in hospital and started physiotherapy next day .

Patient was discharged day 6 post operatively , Mobilizing as tolerated with the assistance of frame walker .

[pst op day 5 follow up patient was mobilizing with assistance abduction of right hip actively measured at 15 degree with 4/5 strength .

Left side hip abduction measured at 30 actively 5/5 strength .

2 weeks follow up radiologically good alignment . abduction of right hip actively measured at 30 degree with 5/5 strength .

Left side hip abduction measured at 30 actively 5/5 strength.



figure (3) :-

figure (4) :-



**figure (5):-**

### **Discussion :-**

Intertrochanteric femur fracture is common among older population 80% of trochanteric fracture in elderly were caused by indoors fall . [4]

Intertrochanteric fracture has high morbidity and mortality rate .Mortality can reach to 21.2% in first year [2]. 5 years mortality reported at 23% [5] With more male to female mortality.

Careful evaluation and early management can reduce the risk of 1 year mortality and complication (including DVT ,pressure ulcers ,urinary tract infection ). [6]

The aim is to reduce morbidity and mortality in patient with intertrochanteric fractures by optimizing Their medical condition And considering suitable and stable fixation method , that promotes early mobilization .

Intertrochanteric fracture is managed depending on fracture pattern and its inherent stability, as the failure rate is highly correlated with the choice of implant and fracture pattern. Fractures with involvement of the lateral femoral wall are considered an indication for intramedullary nailing and would not be treated with a sliding hip screw. Unstable fracture patterns such as fractures with comminution of the posteromedial cortex, a thin lateral wall. [6]

In our cases we faced a question of whether to fix the intertrochanteric fracture With DHS alone or to go for further fixation aiming to produce superior functional outcome and faster rehabilitation. Decision was made to fix stable IT fracture with DHS we opted to add tps and augment with tension band .

Aiming to facilitate rehabilitation and avoid weakness in abduction which may cause further falls or limit patient mobility predisposing him to further morbidity

Whether to fix similar fracture with stated method need further research ,

To find if it adds a further value in hip ROM, (range of motion), faster rehabilitation, limits pain.

### **Conclusion:-**

similar fracture is uncommon , fixation of GT might improve the hip ROM , strength and overall mobilization , further research is needed to figure out the best management in such fractures

### **Acknowledgment:-**

written consent were taken from the patient

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