

## Case report on management and outcome of intertrochanteric femur fracture with deep vein thrombosis (DVT)

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### ABSTRACT:

**Introduction:** Intertrochanteric fractures are one of the most common fractures in the elderly, accounting for 10-20% of all fractures and 50–65% of hip fractures. **Present Complaints and Investigation:** The Female patients 75 years old who has apparently admitted in AVBRH on date 06/07/2021 with the chief complaint of pain and swelling in right hip and also patient has complaint of hypertension and diabetes since 9 years and on regular medication. After physical examination and investigation of blood examination HB is decrease 8.4, RBC is low 3.2 m/cu mm, total platelets count is low 1.80, WBC is high 10800  $\mu$ /lit RBS is 109 mg/dl. Doctor diagnose as femur fracture right side with deep vein thrombosis **Past history:** Patient diagnose with diabetes and hypertension 9 years ago. patient has no history of any operative procedure, patient has no history of any long term hospital stay the main diagnosis. **The main diagnosis, therapeutic intervention and out comes:** After physical examination and investigation doctor diagnose as femur fracture right side with deep vein thrombosis. Injection tramadol 2 in 100 ml NS IV twice. Injection Pantoprazole 40 mg IV once daily. **Conclusion:** She was response to all medication as well as doctor treatment and her recovery was good.

**Keywords:** Intertrochanteric, Thrombosis, Fracture, Femur, Complications

### Introduction:

Intertrochanteric fractures are one of the most prevalent types of fracture in the elderly, accounting for 10%–20% of all fractures and 50–65% of hip fractures. Low-energy impacts generate intertrochanteric fractures, which have a 1-month mortality rate of 5–10% and a 1-year mortality rate of 8–31%. Individuals with an intertrochanteric fracture are now at a significant risk of deep vein thrombosis (DVT) due to hypercoagulability of the blood, post-trauma stress, and the body's inflammatory immunological response. Intertrochanteric fracture was found to be a risk factor for DVT when compared to femoral neck fracture, with a 2.5-fold increase in risk. Furthermore, elderly individuals were more vulnerable to DVTs than younger patients due to the high frequency of various comorbidities. PE is the third most cause of death in the first 24 hours after a trauma, with DVT being the most common cause.<sup>1</sup>

The plasma D-dimer level is the outcome of plasminozyme-mediated cross-link fibrin breakdown, and it has a high sensitivity (greater than 95%) for detecting cross-linked fibrin. It has a limited specificity (about 20–40%) for detecting DVT. There have been a lot of studies done to figure out the risk factors for DVT after a hip fracture, but most of them have been constrained by small sample numbers or have focused on preoperative and postoperative DVTs. The clinical significance of DVT screening during admission is frequently overlooked. In order to screen DVT more specifically, it is required to establish the risk variables

associated with admission DVT and the degree of their association. We conducted this study to determine the prevalence, location, and consequences of admission DVT of bilateral lower limbs in elderly patients with intertrochanteric fracture.<sup>2</sup>

**Patient Information:** Patient admitted in Acharya Vinoba Bhave Rural Hospital with the complaint of the chief complaint of pain and swelling in right hip and also patient has complaint of hypertension and diabetes since 9 years and on regular medication.

**Primary Concern and Symptoms :** Pain in right hip, swelling in right hip, swelling gradually progressed to both lower limbs. this were the primary symptoms which was telling by patient and observed at the time of admission<sup>3</sup>

**Medical, family and psychosocial history :** Patient had a Medical history of diabetes and hypertension since 9 years. her family was not significant. patient looks anxious, depress and confused.

**Relevant past intervention with outcome :** History of patient was apparently all right before 1 month then she fell in bathroom at home 3 weeks ago sustaining injury over right hip. Patient developed pain which was sudden onset gradually progressive. for that she was admitted for treatment. And her outcome was good.

#### **Physical Examination and Clinical Finding**

**General Examination :** State of health was unhealthy, thin body build, but there is a femur fracture hygiene is maintain, patient height is 150 cm and weight is 45 kg.

**Timeline :** 3 weeks ago she fell in bathroom sustain injury over right hip. for that she was admitted for treatment. And her outcome was good. Patient went to local Hospital at Pulgaon 3 weeks ago where she was advised operative management but patient was not willing at that time due to old age later patient came to AVBRH on 06/07/2021. Injection Tramadol and Injection Pantoprazole this medication give to patient.

**Diagnostic Assessment :** After physical examination and investigation of Intertrochanteric (hip fracture) Femur Fracture right side blood examination HB is decrease 8.4, RBC is low 3.2 m/cumm, total platelets count is low 1.80, WBC is high 10800  $\mu$ /lit RBS is 109 mg/dl. X- ray pelvis with both hips Doctor diagnose as femur fracture right side with deep vein thrombosis.

**Therapeutic Intervention :** Medical Management was provided to patient injection Tramadol 2 ml in 100 ml NS IV twice daily, Injection Pantoprazole 40 mg IV once daily. She was took all treatment and outcome was good. Her sign and symptoms was reduced, she was little able to do her own activity no any change intervention in the therapeutic process.<sup>4</sup>

**Follow-up and Results:** After the surgery patient condition was improved

Important follow-up diagnostic and other test result: To preventing the progression of disease and trying to reserve any sign and symptoms that have appeared because of Intertrochanteric femur fracture a Doctor advised follow of after 1 month. and advised to do X- ray, blood investigation and blood pressure examination to know the further disease progression.

#### **Discussion :**

The fact that 15 to 48 percent of elderly trauma patients developed preoperative DVT despite receiving

thromboprophylaxis remained an unsolvable problem Obesity, delay in admission, and elevated D-dimer level were all revealed to be factors in admission DVT following intertrochanteric fractures, with a rate of 20.1 percent overall and 5.9 percent of proximal thrombosis. Most studies now focus on DVT can occur before or after surgery. with DVT that may have happened during admission received less attention. DVT was found in

20.1 percent of senior patients in our investigation, which was consistent to the literature. According to Lu et al., the rate of DVT is increasing. after a hip fracture was 15.8%, which is lower than ours, which could be explained by the fact that the patients in their study were substantially younger (Interquartile range 28–50 years; median age 39.6 years).<sup>5</sup> DVT developed in 18.9% of the 301 elderly individuals with a femoral neck fracture before surgery. according to Xia et al. However, isolated calf muscle venous thrombosis was also deemed DVT in their analysis, and it did take an unusual proportion of cases 77.2%. Xing et al. found a greater rate of DVT among Although they could not specify whether calf muscle venous thrombosis was excluded, the elderly at admission, which was 29.8%. Many studies were published on related aspects of fractures<sup>6-10</sup>. Studies on management and factors related to outcomes I femur fracture were reviewed<sup>11-14</sup>.

#### **Conclusion :**

The Patient was taken to Hospital with the major complaint of pain in leg and swelling in right hip, swelling gradually both in lower limbs. After all investigation patient was diagnose with the case of Intertrochanteric femur fracture at right side. in our case stresses the need for good clinical assessment, good nursing care by trained nurses and the use of effective forensic studies is compulsory to secure patient from such a vital health condition.

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