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A Case of Intertrochanteric Fracture

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Clinical History

A 70-year-old patient came with complaints of left hip pain for 4 days which occurred after sustaining a fall from height.

The pain was sudden in onset progressive in nature. The pain was sharp, shooting in nature which increased on movement and decreased on rest.

No history of any other symptoms

Past History: Not a known case of Hypertension, Diabetes Mellitus, Asthma, Tuberculosis

Examination and Investigations

GENERAL PHYSICAL EXAMINATION:

Pulse: 86 beats per minute

Blood Pressure: 130/80 mmHG

Respiratory Rate: 18 breaths per minute

Mild pallor present, no icterus, no clubbing, cyanosis, lymphadenopathy or edema noticed.

SYSTEMIC EXAMINATION:

PER ABDOMEN:

Soft, non-tender, no free fluid present, normal bowel sounds heard.

CVS: S1, S2 heard, no murmurs.

RS: NVBS heard, no added sounds.

CNS: No focal neurological deficit

LOCAL EXAMINATION:

ATTITUDE: Patient present in supine position, no exaggerated lumbar lordosis, anterior superior iliac spine is at same level, the limb is in external rotation with knee, hip and ankle flexed.

INSPECTION:

Absence of swelling and redness, no wasting and no scars and sinuses.

PALPATION:

Local rise of temperature felt with presence of tenderness over the left greater trochanteric area.

Active toe movements seen with no sensory deficits.

Distal pulsations present.

LABORATORY INVESTIGATIONS:

Hb:6.9%

WBC count:8,000 cu/mm

X RAY:

Following X-ray of the AP view of the pelvis shows the intertrochanteric fracture of the neck of the left femur with displacement



Hip X-Ray

Final Diagnosis

Intertrochanteric fracture of **LEFT FEMUR**

Discussion

CLASSIFICATION OF INTERTROCHANTERIC FRACTURE: Intertrochanteric

(IT) fractures are commonly witnessed.

The classification of the IT fractures is important as it helps us choose from an array of implants for a better outcome and management protocols.

Few classifications focus on the anatomical pattern (Evans; Ramadiers; Decoulx and Lavarde) while others on maintaining reduction of various types (Jensen's modification of Evan's Ender, Tronzo , AO). [1]

Intertrochanteric fracture is the most common of the extracapsular hip fractures many of which may be associated with a varus deformity. Comminuted fractures may occur which may also manifest as separate fragments of either one trochanter or both of the lesser and greater trochanter.[2]

FRACTURE HEALING:

Fracture Healing occurs by callous formation and can occur by primary or secondary union.

Healing by Primary Union: here the ends of the fractures are approximated by application of surgical clamps, metal plates. Herein the bony union occurs with the formation of medullary callous without the formation of periosteal callous.

Healing by Secondary Union: It is more common and occurs upon application of plaster to the broken bone, the steps involved are:

Procallous Formation: Hematoma that has occurred due to bleeding of blood vessels has blood and fibrin which forms granulation tissue. Local inflammatory response occurs which clears away the dead tissue and debris. Ingrowth of the granulation tissue occurs causing formation of callous composed of bony and cartilaginous material.

Osseous Callous Formation: The procallous formed earlier acts as a scaffolding over which forms the osseous callous, the woven bone is taken over by formation of lamellar bone.

Remodelling:

Osteoblastic and osteoclastic activity occurs in the bone helping it remodel in such a way that after sometime the new bone formed looks indistinguishable from the normal bone. [3][4]

Acknowledgements: None

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