1.SUB-TROCHANTERIC FRACTURES.

2.FEMORAL SHAFT FRACTURES.

3.SUPRACONDYLAR FRACTURES OF FEMUR.

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**MECHANISM OF INJURY.**

**A large force is needed to cause fracture femur at this area because of wide cortex.**

**Osteoporosis, Osteomalacia and Paget’s disease or secondary deposits contribute to fractures.**

**CHALLENGES TO TREATMENT.**

**1.Blood loss is greater than femoral neck or Trochanteric fractures. Blood vessels that can be injured include medial and lateral circumflex femoral arteries.**

**2.Difficult and delicate extensions of the fractures.**

**3.The proximal part is abducted and externally rotated by the gluteal muscles and flexed by the psoas.**

**CLINICAL FEATURES.**

**1.Shortening**

**2.Swollen thigh**

**3.Movements is excruciatingly painful.**

**DIAGNOSIS.**

**1.History**

**2.Clinical assessment**

**3.X-rays confirms the #**

**TREATMENT**

**1.Admit patient**

**2.Apply skeletal or skin traction**

**3.Analgesics**

**4.Open reduction and internal fixation.**

**COMPLICATIONS.**

**1.Malunion**

**2.Nonunion.**

**FEMORAL SHAFT FRACTURES.**

**Mechanism of injury.**

* **High energy injury young adults mostly affected.**
* **Fracture patterns are clues to the type of force causing it.>Spiral #s –a fall, Transverse/oblique, comminuted, segmental #s-Direct violence.**

**PATHOLOGICAL ANATOMY.**

**There can be the following fractures:**

**a. Proximal shaft fractures.**

**b. Mid- shaft fractures**

**c. Lower third fractures**

**The soft tissues are always injured and bleeding from the perforators of the profunda femoris may be severe. Over one litre of blood may be lost into the tissues and incase of bilateral femoral shaft fractures the patient become hypotensive, quickly if not adequately resuscitated. Beware of the fractures at the junction of the middle and distal thirds of the femoral shaft. It can be responsible for damaging the femoral artery in the adductor canal.**

**CLINICAL FEATURES.**

**1.Swelling**

**2. Deformity of the limb**

**3.Painful limb**

**4.Features of neurovascular injuries**

**5.Multi-system injury>Femur, tibial/fibula leading to FLOATING KNEE.**

**6.Features of blood loss.**

**DIAGNOSIS.**

**1.History**

**2.Clinical assessment**

**3.Radiological, X-ray Ap, Lat views**

**TREATMENT**

**Emergency treatment, Traction with Thomas splint, Treat shock. Resuscitation>ABCDE.Restore blood volume.**

**Definitive Treatment**

**The patient with multiple stability is very important.**

* **Head injury**
* **Chest injury**
* **Pelvic #s**
* **Multiple organ failure>Increased chances of Fat embolism.**

**ISOLATED FEMORALFRACTURE**

**1.Traction, bracing and Hip Spica- casts for 10 -14 weeks.**

**Indications for Traction.**

1. **Fractures in children**
2. **Contra indications to anaesthesia**
3. **Lack of suitable skill or facilities for internal fixation.**

**2.Plate and screw fixation**

**3.Intra-medullary nailing**

**4.Open medullary nailing**

**5.External fixation**

**Treatment of open fractures:**

**Assess> skin loss, wound contamination, muscle ischaemia and injury to vessels and nerves.**

**COMPLEX INJURIES:**

**1.Fractures associated with vascular injuries**

**2.Fracture associated with knee injury>Floating knee**

**3.Combined neck and shaft fractures**

**4.Pathological fractures**

**5.Periprosthetic fractures.**

**COMPLICATIONS:**

**Early**

**1.shock**

**2.Fat embolism and ARDS**

**3.Thromboembolism**

**4.Infection**

**Late.**

**1.Delayed union**

**2.Malunion**

**3.Nonunion**

**4.Joint stiffness**

**5.Refracture**

**6.Implant failure.**

**SUPRACONDYLAR FRACTURES OF FEMUR.**

**Supracondylar fractures of the femur are encountered.**

1. **Young adults due to high energy trauma.**
2. **Elderly in osteoporotic individuals.**

**Direct violence which may cause fracture above the condyles and may be comminuted.**

**CLASSIFICATION BY AO group:**

**Type A-----------Supracondylar no articular splits**

**Type B------------Shear fracture of one of the condyles**

**Type C-------------Supracondylar and intracondylar fissures**

**CLINICAL FEATURES.**

**1.Swolle knee joint.**

**2.Joint Haemarthrosis**

**3.Painful movements**

**NOTE. Check for popliteal artery injury by checking for Tibial pulses.**

**Diagnosis.**

**X-rays. It is important to x-ray the whole femur.**

**TREATMENT**

**1.Non-operative. Traction with Thomas splint.**

**2. Surgery**

**Locked intramedullary nails, plates, simple lag screws**

**COMPLICATIONS.**

**1.Arterial damage**

**2.Joint stiffness**

**3.Malunion**

**4.Nonunion**