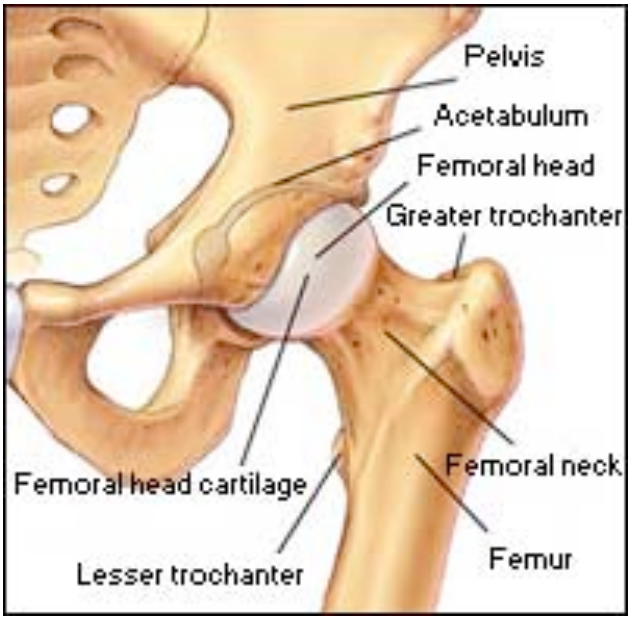
HIP FRACTURES

A hip or proximal femoral fracture refers to any fracture of the femur between the hip joint articular cartilage to a point 5 cm below the distal part of the lesser trochanter excluding femoral head fractures.

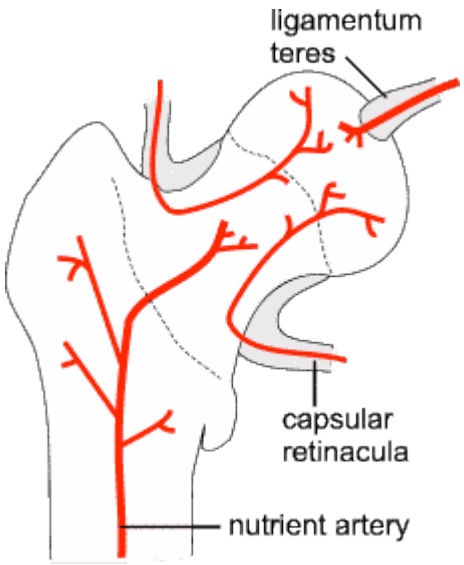
Major cause of mortality and morbidity – from e-medicine 15-20% dead within 12 months. Patients for whom surgery is delayed for 2 days or more, have a 17% higher mortality rate at 1 month.

from bmj clinical evidence Reported figures for mortality after a hip fracture in adults vary considerably. One year mortality figures vary from 12% to 37% with about 9% of these deaths being directly attributed to the hip fracture. After a hip fracture a 15–25% decline in the ability to perform daily activities is to be expected, and about 10–20% of the survivors will require a change to a more dependent residential status.

ANATOMY

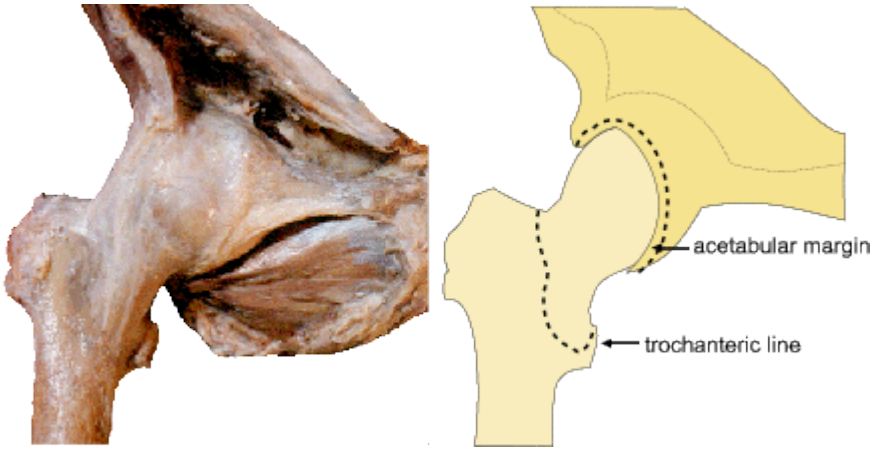


Important things for treatment are blood supply to femoral head

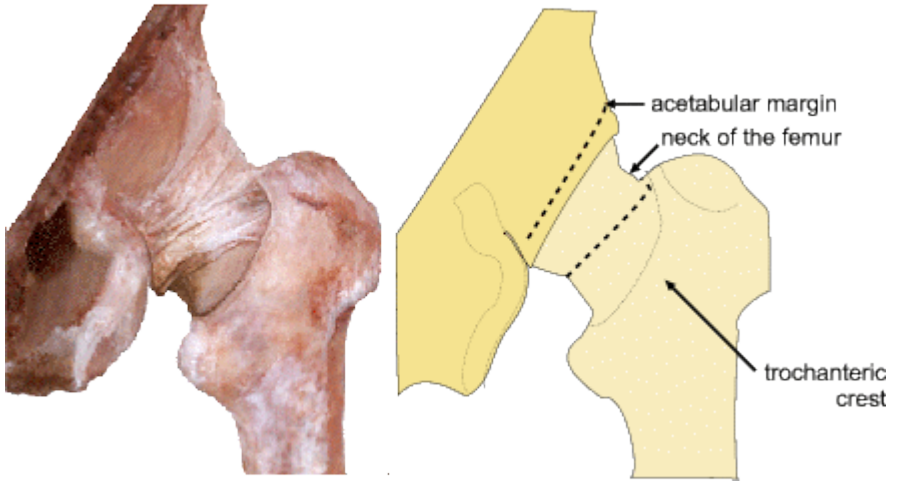


If femoral neck fracture can lead to AVN.

And capsule - attaching proximally to the acetabulum and transverse acetabular ligament. The fibrous capsule attaches distally to the neck of the femur only anteriorly at the intertrochanteric line and root of the greater trochanter. Posteriorly, the fibrous capsule crosses to the neck proximal to the intertrochanteric crest without attaching to it. The fibrous capsule thickens to form 3 ligaments of the hip joint: the Y-shaped iliofemoral ligament (of Bigelow), the pubofemoral ligament, and the ischiofemoral ligament.



ant view



post view

Intra-capsular fractures delayed healing as separated from surrounding soft tissue and capillaries.

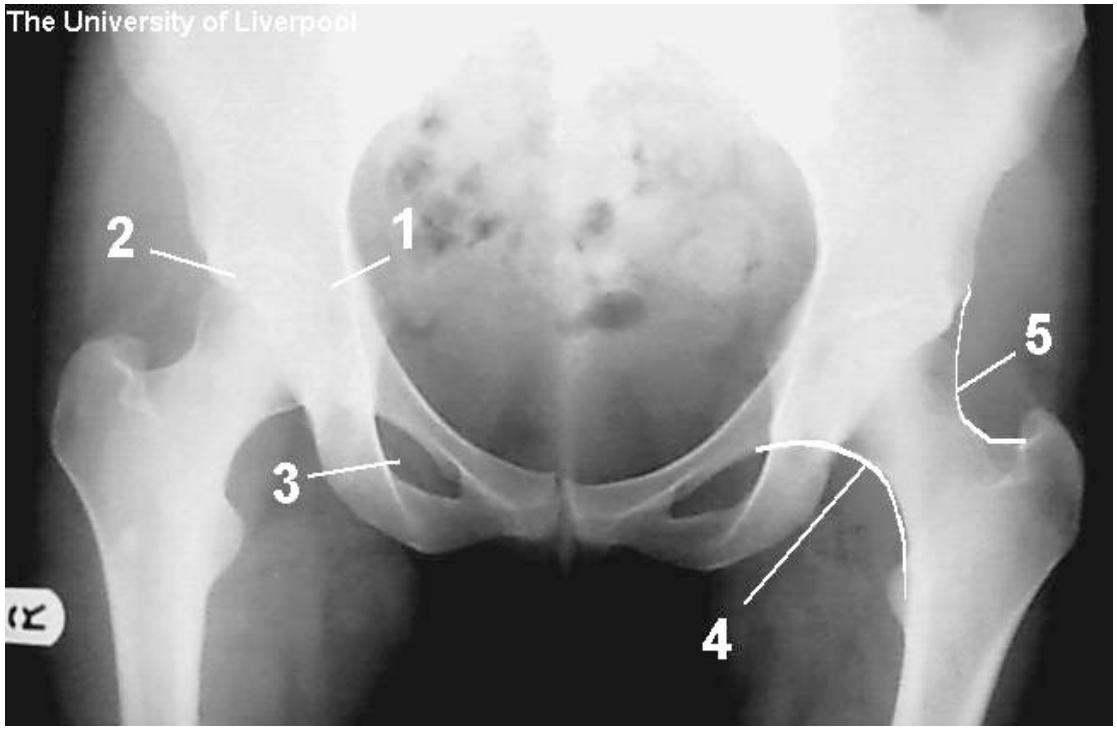
Presentation

Pain in hip, back or knee

May occur spontaneously but usually after trauma

Leg shortened and in ext rotation

Imaging



Shenton's line – continuous line from superior aspect of obturator foramen to inferior aspect of femoral neck

Neck-shaft angle – 120° - 130°

MRI – 100% sensitive if equivocal x-ray

Treatment

IV access and bloods

Analgesia

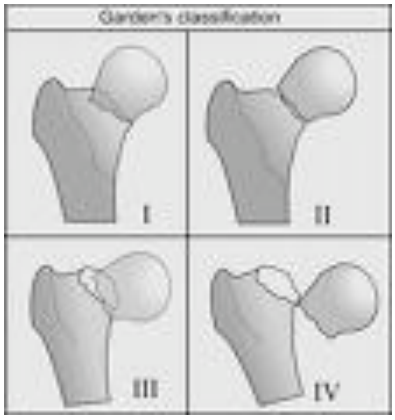
Why fell?

Orthopaedics

Classification

Sub-capital/femoral neck

- Worst healing
- Highest chance AVN
- Further classified by Gardner's



I and II – hip screws

III and IV – hemiarthroplasty

Inter-trochanteric

Stable - Fractures with an intact posteromedial cortex

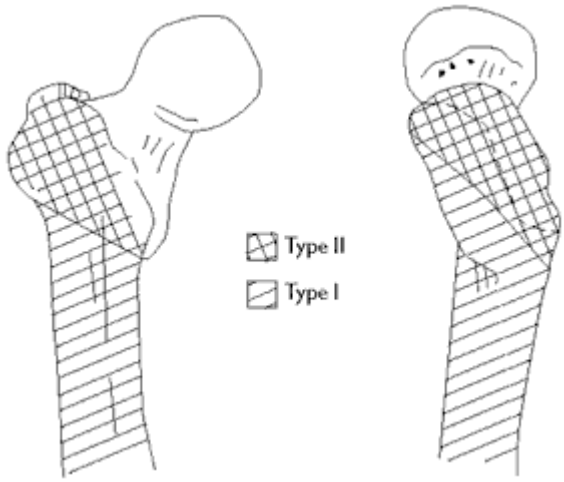
Unstable - Fractures with comminution of the posteromedial cortex, fractures with diaphyseal extension

'reverse oblique fractures' – fracture parallel with femoral neck, v unstable because of femoral tendency o displace medially

Sub-trochanteric

Region below lesser trochanter to point 5cm distal or femoral isthmus

Most unstable



Russell-Taylor classification of subtrochanteric fractures. Type I fractures do not extend into the piriformis fossa, and thus, intramedullary nailing can be beneficial. Type II fractures extend proximally into the greater trochanter and involve the piriformis fossa; this involvement complicates closed intramedullary nailing techniques.

Also AO classification but didn't seem that useful

http://www.aofoundation.org/wps/portal/surgeryskully?showPage=diagnosis&bone=Femur&segment=Proximal

http://membrane.com/aona/longbone/31.html