

Intracapsular femoral neck fractures

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Intracapsular fractures are further broken down into whether they are displaced or undisplaced. Undisplaced intracapsular fractures are generally stable and interruption of the blood supply to the femoral head is rare. Therefore, treatment is aimed at ensuring that the head fragment does not displace during rehabilitation. This can be achieved with cannulated screws inserted along the femoral neck into the head. - A displaced intracapsular fracture may cause disruption of the blood supply either through direct injury to the arteries (a) (b) or joint capsule intra-articular haematoma can affect the survival of the femoral head, leading to avascular necrosis. If the patient is physiologically young, reduction and internal fixation with cannulated screws or a dynamic hip screw might be attempted to preserve the native head. If the patient is older and would benefit from a single operation, the head may be sacrificed and replaced with a prosthetic head. Arthroplasty of the proximal femur may take the form of hemiarthroplasty or total hip replacement, depending on the patient's functional demands. Extracapsular femoral neck fractures If the fracture is extracapsular, vascularity of the head is not an issue. Extracapsular femoral neck fractures are subdivided into stable or unstable. Unstable fractures include a reverse oblique pattern or where the medial calcar is a comminuted (lesser trochanter) fracture. Stable extracapsular fractures simply require connection of the head to the shaft, often using a dynamic hip screw (Figure 32.26). In unstable fractures a dynamic hip screw can also be used, but, owing to the unfavourable mechanical environment relating to the loss of the medial calcar or a reverse oblique pattern an intramedullary device might be considered.

Dynamic hip screw Smooth barrel in which screw can slide Figure 32.26 (a) A dynamic hip screw for fixing a trochanteric proximal femoral fracture. This allows for compression at the fracture site on load-bearing and protects the femoral head from penetration by the screw when the osteoporotic bone settles; (b) insert to show the sliding screw in the barrel.

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