Fractured Neck of Femur

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Introduction

- Increasing due to increasingly aged population
- In young pts due to high energy trauma or infiltration (e.g. tumour)
- Lifetime risk:
  - 15% for women
  - 5% for a man
Major risk factors

- "Urban Caucasian women of slight build & physically inactive"

- Others:
  - Drugs – tranquilisers, EtOH
  - Senile dementia
  - Hx of prev # NOF
  - Lack of exercise
  - Visual impairment
  - Cardiac arrhythmias
  - Electrolyte disturbance
  - Hypothermia
Osteoporosis

- What is it?
  - "Disease process associated with aging and inactivity; it is characterised by decreased bone mass with normal mineralisation and results in loss of bone strength".
Classification

- Extracapsular
  - Trochanteric
    - Basal
    - Pertrochanteric
    - Intertrochanteric or transtrochanteric
    - Subtrochanteric
  - 5 cm

- Intracapsular
Garden’s Classification (intracapsular)

- Intracapsular #'s
- I & II = Nondisplaced
- III & IV = Displaced
Intracapsular #NOF

Nondisplaced / impacted

Displaced
Symptoms / Signs

IMPACTED #NOF
- Groin pain referred down medial thigh
- Antalgic gait
- Limited hip motion

DISPLACED
- Generalised hip pain with thigh in external rotation and abduction. Slight extremity shortening often present.
Classification of extracapsular #’s

Type 1
Two part undisplaced

Type 2
Two part displaced

Type 3
Three part, loss of posterolateral support

Type 4
Three part, loss of medial support

Type 5
Four part
Assessment

- **History:**
  - Concomitant medical illness
  - Drugs
  - Prefracture mobility
  - Social circumstances

- **Examination**
  - Look for dehydration
  - Cardiorespiratory exam
  - Other joints
  - CNS problems + MTS (single best predictor of outcome!)
Investigations

- AP + Lat view of hip + CXR
- Bloods (FBC, U+E, G+S) – Others if indicated
- ECG
Initial Rx

- Analgesia – morphine
- Fluid resuscitation
- Thromboprophylaxis
Definitive Rx

- Target for surgery for hip #’s is within 24 hrs of injury unless there are acute medical problems which can be optimised preop (Audit Commission)
Treatment algorithm

- Hip fracture
  - Intracapsular
    - Undisplaced
      - Conservative
      - Internal fixation
    - Displaced
      - Arthroplasty
      - Non-treatment
  - Extracapsular
    - Traction
      - Intramedullary fixation
    - Extramedullary fixation
Treatment modalities 1

- Conservative:
  - Rarely used; only for impaction type
  - Needs X-ray monitoring
  - Displacement rates = 15%
Internal fixation of intracapsular #’s

Indications:
- Undisplaced intracapsular #’s
- Minimally displaced IC #’s
- Displaced IC #’s in physiologically young
- Displaced IC #’s in the elderly

Note: 19% will need further surgery within 1 year for AVN, #, screw prominence and sepsis
Treatment modalities 3

- Intracapsular #'s:
  - Cemented bipolar
  - Uncemented Austin Moore
Extramedullary fixation of extracapsular #'s

Indications:
- Trochanteric and high subtrochanteric fractures