Treatment of Femoral Neck Fractures through the Anterior Approach

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- AMIS since late 2004
- over 290 AMIS so far
- 160 FNF
- Trauma - pathological fractures
Protocol

• Same-day surgery in healthy patients

• Old and sick patients:
  • Extension
  • Anesthesia and IM consult preop
  • Operation in optimized patient
POSTOPERATIVE PROTOCOL

- One night in IMC
- Compression with sandbag 4 h
- Drains out after 48 h
- Full weight bearing
  - Exceptions:
    - Osteoporosis
    - Intraoperative contraindications
Results

- Retrospective Analysis
- 286 THR between 1/2005 and 9/2008
- 160 consecutive HR after FNF included in this study
- 96 THR, 64 Hemis
Patients

- Age at surgery: 77 years (48 - 99)
- 125 women, 35 men
Patients

• NO selection

• Only bias: if life expectancy less than 5 years
  • hemiarthroplasty
Criteria

- FNF (Pauwels 3/ Garden 3/4)
- Treatment changes (DHS / screws) excluded
- Follow up > 6 months
Literature

- Blomfeldt R, Törnkvist H, Ponzer S, Söderqvist A, Tidermark J.

**INTERPRETATION:** We found that a secondary THR after failed IF results in inferior hip function compared to a primary THR for a displaced femoral neck fracture in the active and lucid elderly patient. Moreover, the patients with failed IF had to undergo at least one re-operation and experienced a significant reduction in HRQoL before the salvage THR.
Follow up / Technique

- Patients examined by 2 surgeons
- Data collected:
  - ROM
  - PAIN
  - MOBILITY
  - XRAY
Comorbidities

• Cardial: Arrythmias, CHC, Hypertension, Tachycardia, MI, CHF
• Renal: kidney failure
• Pulmo: COPD, Pneumonia, Asthma
• Metabolic: IDDM/NIDDM, gout
• Psychological/neurological: Alzheimers, Depression, CVI
Results

- On average every patient had at least 2 comorbidities
Bloodloss

- 65% no blood transfusion
- 25% received 1 to 2 bts
- 11% required 3 or more bts
Comparison

Our first 45 cases

Bloodtransfusion after FNF

- NO BTs: 47%
- 1-2 BTs: 32%
- 2 or more BTs: 21%

Bloodtransfusions in THR (atraumatic)

- 0 BTs: 72%
- 1 BT: 7%
- 2 BTs: 14%
- 3 or more BTs: 7%
Hb - decrease

- FNF: 1,93 g/dl preop - postop
- Arthritis: 0,85 g/dl
- Total: 1,39 g/dl
ASA - Classification

ASA 1: Healthy patient, no medical problems

ASA 2: Mild systemic disease

ASA 3: Severe systemic disease, not incapacitating

ASA 4: Sever systemic disease that is a constant threat to life

ASA 5: Moribund, not expected to live 24 hours irrespective of operation.
Complications

- 3 Seromas: no further treatment necessary
- 3 Hematomas:
  - 1 revised, ligature insufficient,
  - 2 revised, no bleeding found
- 2 Subsidance:
  - revised, periprosthetic fracture, Cerclage
  - revised, shaft revised, no fracture
- 2 Periprosthetic Fractures: Cerclage
Results

- ROM better compared to standard approach (Watson-Jones)
- AMIS patients have advantage over conventional THR patients for first 6 months, afterwards results similar
Results

• Patients satisfaction of AMIS exceeds that of conventional THR
• „Hybrids“ prefer AMIS
• Significantly less wound complications
Advantages

- MIS
- Less tissue trauma
- Reduced OR -personnel
- Faster Rehabilitation
- OR time similar
- Satisfied patients
- Satisfied surgeons
Result

• THR and Hemi through anterior approach treatment of choice at our department after FNF

• Recommended if fast recovery and early mobilisation are crucial

• Suited for old and sick patients as well
Literature

- Tidermark J, Ponzer S, Svensson O, Söderqvist A, Törnkvist H.
- Internal fixation compared with total hip replacement for displaced femoral neck fractures in the elderly. A randomised, controlled trial.

102 Pts, Age 80y
THR vs IF

"The results of our study strongly suggest that THR provides a better outcome than IF for elderly, relatively healthy, lucid patients with a displaced fracture of the femoral neck."

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Literature

- Johansson T, Bachrach-Lindström M, Aspenberg P, Jonsson D, Wahlström O.

143 Pts, 75+y
THR vs IF
 „The Harris hip scores were higher in the THR group, and pain was more common in the internal fixation group. In lucid patients, THR gives a better clinical result at the same cost.“
Cases
Thank you for your Attention!