SLIPPED EPIPHYSIS - THE UNPINNABLE HIP

William Tice
June 1997
S.C.F.E.

• WHAT IS UNPINNABLE?

• HOW TO TREAT?
Classification

• Chronic
• Acute
• Acute on chronic
• Stable
• Unstable
  – Loder et al. JBJS 1993
Severity of Slip

- Mild <30 degrees <33%
- Moderate 30-60 deg 33-50%
- Severe >60 degrees >50%
Goals of Treatment

- Prevent further slip
- Restore & maintain function
- Avoid complications
Standard Treatment - PIN IN SITU

- Number of screws?
- Metal removal?
- Contralateral hip?
Why Unpinnable?

• Technical
• Unacceptable deformity-
  range of movement
degeneration later
Technically pinnable?

- Nadine’s story

Screw Fixation of Grade III SCFE
Herman et al. CORR 1996; 322
Deformity - Range of movement

- Remodeling of neck
- Return of motion

- O’Brien et al. JBJS 1977 59A(1)
- Wong-Chung et al. JPO 1991 11(1)
- Siegel et al. JBJS 1991 73A(5)
Deformity-degeneration later

- Untreated = treated!

- Hagglund et al. CORR 1986; 210
COMPLICATIONS

Avascular necrosis

• Acute
• MUA
• Multiple Pins
• Osteotomy
COMPLICATIONS

Chondrolysis

• Severity
• Pin penetration
• Spica
• Osteotomy
Severe Acute Slip

- Forced MUA = AVN
- Traction
- Gentle PUA
Severe Slip
Treatment options

• Heyman-Herndon Epiphysiodesis
  – Szypryt et al. JBJS 1987; 69B(5)

• Osteotomy
Osteotomies

- Cuneiform
- Base of neck
- Transtrochanteric
- Trochanteric
Cuneiform osteotomy

- Dunn - open reduction
- Fish
- Preserve posterior vessels
- Shorten neck so no tension
- AVN > 20%
  - Broughton et al. JBJS 1988; 70B(3)
  - Gage et al. JBJS 1978; 60A(3)
Trochanteric Osteotomy

- Southwick biplane 1967
- Chondrolysis 25%
- Residual deformity

- Salvati et al. JBJS 1980; 62A(4)
Long term outcome

• Reallignment no benefit
• Pin if possible

Carney et al. JBJS 1991; 73A(5)
Jerre et al. JBJS 1996; 78B(5)
Conclusion

• No slip is unpinnable - almost!

• Dunn if it is

• Trochanteric osteotomy later