A review of Open Reduction and Internal Fixation of the Os Calcis at Wirral University Teaching Hospital.

(UK)

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The disclosure is in the Final AOFAS Program Book.
We have no potential conflicts with this presentation.
Background:
- Os calcis is the commonest tarsal bone to be fractured
- Many radiological description of Os Calcis fracture exist
- Intra articular and extra articular components often present
- Pain and reduced function exist after conservative and operative treatment

Aim:
- To assess clinical and radiological outcomes of Os Calcis fixation at Wirral University Teaching Hospital.

Methods:
- Retrospective case note analysis (from 2005)
- Retrospective X ray analysis, manual and digital goniometry on lateral exposures pre and post operatively
- Retrospective classification of coronal CT scans (widest view of posterior subtalar facet)
Patient Cohort

• 48 fracture fixations
• 36 compete data sets

• 1 case of bilateral surgery

• Average age of 48.2 years (12-74 years)

• 19 manual workers, 4 professional workers, 9 unemployed

• 18 smoking patients (20-40 cigarettes / day)
• 20 patients who consumed alcohol (1-100 units per week)

• 2 diabetic patients
• 1 habitual intravenous drug user
• 1 rheumatoid patient (not on steroid)
Early (2 weeks) complications

Patient 1) Wound breakdown (74 yrs, no alcohol / smoking)
Patient 2) Wound infection (38 yrs, 15u/w alcohol / no smoking)
Patient 3) Wound breakdown (50 yrs, no alcohol / 2 cigs per day smoking)

Intermediate / late complications

- 5 further surgeries for wound breakdown
- 3 infected wounds requiring PO antibiotics
- 2 patient requiring coverage (plastics)
- 2 further falls requiring further foot surgery
- 4 documented symptomatic sub-talar joint arthrosis
Reconstruction of Normal Bohlers and Guissain angles

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Sanders Classification

Grade 1 = 0

Grade 2a = 7 pts
Grade 2b = 3 pts
Grade 2c = 1 pt

Grade 3ab = 8 pts
Grade 3ac = 7 pts
Grade 3bc = 2 pts

Grade 4 = 12 pts

No correlation to time spent non weight baring or outcomes
9.6 ORIF’s per annum
- Consultant led service
- Thoughtful choice of candidate = low complication rate
- High rate of manual workers and unemployed
- Falls of >10ft not necessary to fracture
- Average wait of 13.5 days to surgery
- Smoking = early wound problems? Relapse on discharge
- Tourniquet time < 1.5 hrs – low complication
- No association between outcome and Sanders
  - Good anatomical restoration = low fusion rate (0)
Conclusions

• No correlation between clinical outcome and radiological evaluation / classification
• 4 symptomatic subtalar arthrosis
• No cases of arthrodesis or amputation
• Outcomes reflect careful consideration of patient required to perform ORIF on.
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