Distal Radius Fractures in the Elderly: Benign Neglect?

Michael D. McKee, MD, FRCS(C)
Professor and Chair, Department of Orthopaedic Surgery
University of Arizona, College of Medicine, Phoenix, AZ

Distal Radius Fractures:

Single most common fracture in adults less than 75 years of age.
Treatment and prognosis continue to be unclear.

Cochrane Collaboration, 2012

Reduction Criteria:
Intra-articular
Extra-articular
> 2 mm step or gap leads to osteoarthritis of the radio-carpal joint in a high percentage of individuals followed over time.

Jupiter and Knirk 1986
Gelberman 1999

Clinical Significance?

• However, the “arthritis” described in these papers was primarily radiographic in nature.

• Both senior authors remarked on the lack of associated clinical symptoms.

• Late surgical intervention (i.e., wrist arthrodesis or arthroplasty) is very rare in this setting.

• The use of a 2 mm intra-articular step to justify surgery in the elderly is completely unjustified.

Reduction – Extra-articular

Neutral ulnar variance
Neutral or volar tilt
Radial Angle < 5° loss
No carpal malalignment
• Koval KJ “Fractures of the distal part of the radius. The evolution of practice over time. Where’s the evidence?” JBJS(A) 2008

• ABOS exam cases from 1999 to 2007
• Operative Rx distal radial fracture
• ORIF from 42% to 81% ($p<0.0001$)
• “Striking shift in fixation strategy… despite a lack of improvement in surgeon-perceived functional outcomes.”

• Aorora R et. al. “A comparative study of outcome of unstable colles type distal radius fractures in patients over 70 years: nonoperative treatment versus volar locking plating” JOT 2009

• Retrospective review of 130 consecutive patients > 70 yrs of age
• Radiographic outcomes better in ORIF group
• Mean f/u 5 yrs – no clinical difference
• “Nonoperative treatment may be the preferred method of treatment in this age group”

**Clinical significance**

“The elderly patients in this study accommodated very well to surprising degrees of radiographic deformity without any diminution of wrist outcome scores at long-term follow-up.”
Plate fixation too distal

Specific Operative Indications

• Volar displaced fractures
• Fracture-dislocations
• Multiple fractures
Malunion

Clinical deformity
Clinical deformity

Dorsal fracture dislocations
Conclusions

- There has been a dramatic increase in the use of operative intervention (volar locked plating)
- The clinical benefits of volar locked plating are modest at best, and are seen in the early post-op period
- There are specific operative indications
- Older individuals adapt very well to surprising degrees of radiographic deformity, and the majority should be treated non-operatively