Distal radius fracture

Case discussion

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Female 62 y, fall on outstretched hand

- History
- Physical examination
- Investigation
- Classification
- Initial management
- Plan of treatment
- Prognosis & complication

Dinner fork deformity
History

- When?
- Where?
- How? (mechanism of injury)
- Associated symptom
- Underlying disease
Physical examination

- Deformity, wound
- Point of tenderness
- Range of motion
- Neurovascular : 
Investigation

- Routine: True PA (PA zero) and lateral view
- Oblique view
Case 1

Parameters

- Radial ht.
- Radial inclination
- Volar tilt
- Intra-articular

- Extra-articular fracture
- Dorsal angulation (volar apex)
- Dorsal tilt
- Dorsal comminution
- Radial shortening
Classification

- Fernandez (1987)

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Type I</td>
<td>Bending fracture of the metaphysis</td>
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<tr>
<td>Type II</td>
<td>Shearing fracture of the joint surface</td>
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<tr>
<td>Type III</td>
<td>Compression fracture of the joint surface</td>
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<tr>
<td>Type IV</td>
<td>Avulsion fractures, radiocarpal fracture, dislocation</td>
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<tr>
<td>Type V</td>
<td>Combined fractures (I, II, III, IV); high-velocity injury</td>
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Indication for surgery

1. Unstable
   1) Fernandez type II, IV, V and some case in I, III
   2) Lafontaine criteria > 3 of 5 instability parameters
   3) Secondary displacement after casting

**Lafontaine criteria (1989)**
- Dorsal angulation > 20°
- Ulnar fracture
- Dorsal comminution
- Intraarticular Fx
- Age > 60
2. Irreducible fracture
   1) Double die punch
   2) Displaced comminuted PM fragment
   3) Articular step off > 2 mm
   4) Severe comminution
   5) Shortening > 5mm
3. Unacceptable alignment
   1) Radial inclination < 15°
   2) Shortening > 5 mm
   3) Dorsal tilt > 10°
   4) Volar tilt > 20°
   5) Articular step off or gap > 2 mm

4. Open fracture

5. Associated injury