Management of Distal Radial Fractures

Background and rationale: Fractures of the distal radius are common and result from both high- and low-energy trauma. The goal of treatment is to optimize functional recovery rather than to achieve specific radiologic parameters. In exercising their judgment, healthcare professionals are expected to consider the needs, preferences, concerns, and values of their patients. **Inclusions:** Skeletally mature patients with distal radius fractures, including fragility fractures. **Exclusions:** Patients with open fractures, pathologic fractures, and multiple fractures.

Standards of Care

1. The mechanism of injury, including hand dominance and occupation, clinical findings, skin integrity, assessment of circulation, nerve integrity, and comorbidities that may influence treatment choice should be assessed and documented in the patient's records.
2. Radiographic evaluation of the wrist must include AP and lateral views centered on the distal radius.
3. Analgesics should be offered, and temporary splinting provided when appropriate.
4. Patients and carers should be given information about expected functional recovery, possible complications, and self-directed rehabilitation, including advice on return to pre-injury activities. This should be in the patient's own language and/or in a pictorial format and should be available in both printed and digital formats.
5. For fragility fractures and in patients over 65 years of age, nonoperative immobilization is considered the primary treatment for dorsally displaced distal radius fractures, unless there is significant clinical deformity and/or neurological compromise.
6. When using a below-elbow slab or cast, the wrist should be in neutral flexion with a 3-point splint used to hold the fracture and not in extreme palmar flexion. The goal is to remove the cast and begin mobilization by 4 weeks after the injury.
7. For high-energy injuries (usually in the young), consider distal radioulnar joint disruption, intra-articular step, and patient needs when assessing whether the patient can benefit from surgery.
8. If a closed reduction is indicated, it should be performed with a hematoma block by an appropriately qualified and trained practitioner.
9. If surgery is decided upon, it should be performed within 7 days of presentation at the institution.
10. Patients presenting more than 2 weeks after their initial injury should be considered for nonoperative management and an individualized treatment pathway should be established.
11. The WHO Surgical Safety Checklist must be completed, and a single dose of appropriate prophylactic antibiotics should be given at the start of surgery.
12. Volarly displaced fractures are unstable. Open reduction and plate fixation should be considered.
13. When surgical fixation is indicated for dorsally displaced distal radius fractures, offer K-wire fixation with intraoperative fluoroscopy if radiocarpal disruption can be satisfactorily reduced with closed manipulation. If not, consider open reduction and internal fixation.
14. Follow-up at 2 weeks is required for patients who have undergone open reduction and internal fixation. K-wires should be removed at 4 weeks. Further follow-up should follow local guidelines and should ensure safe wound healing.
15. Radiographs of the wrist at cast or slab removal are not required unless there is clinical cause for concern.
16. Patients should be able to access advice and follow-up with the treating hospital if they have concerns, or if there are reported complications.
17. Post-menopausal women and those with fragility fractures should receive a multifactorial fall risk assessment, a nutritional assessment, a review of bone health, and appropriate medications should be prescribed as indicated.
18. All cases should be audited against the above standards and complications reported. The audit should be presented at the department meeting. This should be done quarterly and then annually once established.

These standards are developed from professional international consensus from the region, from limited randomized controlled trials, and retrospective cohort studies, and are not designed or intended to be comprehensive.