# Distal Radius Fracture

## Introduction

Distal radius and carpal bone form the wrist joint, and distal radius fracture usually occur in elderly patient after a fall injury. Distal radius fracture in young patient usually happens after a major trauma. It can significantly affect the wrist function if the distal radius fracture is not treated properly. There will be wrist swelling after distal radius fracture and the upper limb should be elevated, minimizing haematoma or fracture blister formation.

## Indication

- In the presence of wound or open fracture, priority for wound management is most important and debridement surgery may be required.
- When the fracture is displaced, with associated joint dislocation or failed conservative management, it should be considered for operative reduction and internally fixation. This aims for minimizing complications of fracture including fracture re-displacement, loss of wrist function and allowing early mobilization.
- In general, internal fixation is accompanied with the use of prophylactic antibiotic for reducing infection. Fixation methods include use of K-wire, tension band wire, screws, plates and sometimes the fixation is assisted by arthroscopy. After fixation, cast immobilization is usually unnecessary.
- In complicated situations such as severe open fractures, comminuted fractures, or when there is soft tissue defect, extra procedures such as bone grafting, external fixation frame or microvascular reconstruction may be necessary, usually in stages.

## Risk and Complication

### *General Risks*

Like other orthopaedic operations, there are risks and complications: those associated with anaesthesia, medical illness and wound, such as pneumonia, infection, blood loss, stroke, heart attack, death is possible during or after an operation due to severe complications.

### *Specific Risks*

- Wound infection
- Wound healing problem
- Tendon (especially Extensor Pollicis Longus), nerve (especially Superficial Radial and Median) and vascular injuries
- Malunion and non-union
- Fracture re-displacement
- Residual pain, weakness and stiffness (from injury +/- surgery)

- Compartment syndrome, Complex Regional Pain Syndrome
- Follow-up surgeries
- Possibility of retained broken instruments or implants

**After the Procedure and Follow Up**

- The fracture may take 6 to 8 weeks to heal
- Physiotherapy training is the first step for rehabilitation. After the fracture is fixed, or when external cast is off, the wrist must mobilize as soon as possible, regaining mobility and preventing muscle atrophy
- Additional investigation and treatment for osteoporosis may be necessary as it is a common risk factor for elderly patient with wrist fracture

**Alternative Treatment**

- If it is simple fracture and the wrist articulation is preserved, conservative management with a Plaster-of-Paris or splint is adequate.

**Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. The actual risks vary for different patients. During the operation, unpredictable condition may arise, and additional procedures may be performed if necessary. For further information, please contact your doctor.