

## **Ankle Fracture Fixation Surgery**

### **Introduction**

The ankle joint is the largest, heavily loaded articulation in the foot & ankle. It has to maintain stability, as well as provides mobility. Most ankles are fractured as a result of indirect injury, from either an internal or external forces of twist, turning or rotation, resulting in fracture and/or ligamentous injuries. When serious it can lead to dislocation or even open fractures.

The ankle joint is formed from three pieces of bones, if the fracture cannot be reduced accurately, it would lead to post-traumatic osteoarthritis.

### **Management of Fractures and Procedure**

- Ankle will swell after it fractures, the lower limb should be elevated, avoiding haematoma or fracture blister formation.
- If there is a wound, or the fracture is open, priority wound management is the most important, debridement surgery becomes necessary.
- If the fracture is mild and the ankle articulation is preserved, conservative management with a Plaster-of-Paris is adequate. Patient can walk with crutches, without weight bearing on that foot.
- When the fracture is displaced, or even dislocated, it should be considered for operative reduction and internally fixed. In general, internal fixation is accompanied with the use of prophylactic use of antibiotic for reducing infection. Fixation methods include use of K-wire, tension band wire, screws and plate. After fixation, cast immobilization may not be necessary.
- 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, failure to recover etc, endangering body, mind and life, frequently calls for further treatment.

#### ***Specific Risks***

- Risks are related to the fracture itself: non-union, mal-union, joint stiffness, and post-traumatic osteoarthritis.
- Risks are also specific such as wound complications, nerve injuries, complex pain syndrome and problems with implants including loosening or exposure. All may well require further treatment.

### **After the Procedure and Follow Up**

- Most patients with an ankle fracture need to avoid loading that foot for about six weeks, using two crutches for non-weight-bearing walking.
- Physiotherapy training is the first step for rehabilitation. After the fracture is fixed, or when external cast is off, the ankle must mobilize as soon as possible, regaining mobility and preventing muscle atrophy; returning to weight bearing can reduce mineral loss in the bone.

### **Remarks**

The information contained is very general, the list of complications is not exhaustive and other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor.