

Introduction

The ankle joint is the largest, heavily loaded articulation in the foot and 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 force of twist, turning or rotation, resulting in fracture and /or ligament 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 hematoma 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.

The Operation

1. 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.
2. When the fracture is displaced or dislocated, consider operative reduction and internal fixation (K-wire, tension band wire, screws and plate) with prophylactic antibiotic cover. After fixation, cast immobilization may not be necessary.
3. In complicated situations (severe open fractures, comminuted fractures, or soft tissue defect), extra procedures (bone grafting, external fixation or microvascular reconstruction) may be necessary, usually in stages.

Preoperative Preparation

1. Admit 1 day before or on same day of this “elective” operation.
2. Anesthetic assessment. **Inform your doctors** about drug allergy, regular medications or other medical conditions.
3. Keep fast for 6 to 8 hours before operation.
4. Empty bladder and change to operation clothes before transfer to operating room.
5. Pre-medication, antibiotic prophylaxis intravenous line may be required.

Postoperative Instruction

- A. General**
1. Mild throat discomfort or pain because of intubation.
 2. Mild discomfort or pain over the operation site. Inform nurse or doctor if pain severe.
 3. Nausea or vomiting are common; inform nurses if symptoms severe.
 4. Inform nurses if more analgesics are required.
- B. Wound care**
1. Stitches or skin clips (if present) will be taken off around 10-14 days.
 2. The drainage tube will be removed by doctor when drainage decreases, but patient may go home with the drainage tube.
- C. Diet** Resume diet, usually 4 hours after anesthesia, and when taking sips of water well.

Common Risks and Complications (not all possible complications are listed)

A. Anesthesia related complications

1. Cardiovascular: myocardial infarction or ischemia, stroke, deep vein thrombosis, pulmonary embolism, etc.
2. Respiratory: atelectasis, pneumonia, asthmatic attack, exacerbation of chronic obstructive airway disease.
3. Allergic reaction and shock.
4. Toxicity of local anesthetic may result in serious complication although rare.

B. Procedure related complications

1. Risks are related to the fracture itself: non-union, mal-union, joint stiffness, and post-traumatic osteoarthritis.
2. 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.

Things to take note after discharge

1. Contact your doctor or a nearby Accident & Emergency Department if you find increasing discharge, pain and or redness around the wound.
2. Take analgesics prescribed by your doctor if required.
3. Avoid loading the injured foot **for about six weeks**, using two crutches for non-weight-bearing walking.
4. 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.
5. Resume daily activity gradually.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor. Evangel Hospital reserves the right to amend this leaflet without prior notice. We welcome suggestions or enquiries on the information provided in this leaflet. Please contact our Healthcare professionals so that we could follow up and make improvement.

Reference

Hospital Authority: “Ankle Fracture Fixation Surgery” (2021)
Smart Patient: http://www.ekg.org.hk/pilic/public/O&T_PLIIC/O&T_AnkleFractFixation_0001_eng.pdf (12-07-2023)