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Operation Information

Open Reduction and Internal Fixation

Introduction

It is an operation used to fix serious fractures that cannot be treated with a cast or splint. “Open reduction” means to make an incision to re-align the bone. “Internal fixation” means the bones are held together with implants such as metal screws, plates, rods or pins. In most cases, the implants are not removed after the bone heals.

Outcomes

The bone fragments are returned to their normal alignment and rigidly fixed to reduce the incidence of nonunion and malunion. It helps to reduce pain, prevent further damage and restore mobility by helping the bone heal in the right position.

Procedures

1. The operation is performed under general anaesthesia.
2. An incision is made in the skin over the bone.
3. The broken bone is placed back into its normal position.
4. The implants are applied to hold the bone together.
5. X-rays may be taken after the implants are attached.
6. The wound is closed with stitches or staples.
7. A cast or splint may be placed for extra support.

Possible Risks and Complications

1. Wound pain and swelling
2. Wound infection
3. Nerve or blood vessel damage causing limb sensation and mobility alteration, or massive bleeding
4. Tendon or ligament damage
5. Reduce or loss of mobility
6. Incomplete or abnormal bone healing
7. Dislodgement of the implants
8. Compartment syndrome: a build-up pressure within the affected limb and can cause pain, nerve damage, blood vessel damage and muscle damage
9. Pulmonary embolism (blood clots in the lungs)
10. Surgical instruments may be broken off and retained at the surgical site during the operation

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all operations are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.



Source:
<https://assets.yourpractice.online/2259/3d-images/radial-head-orif-and-replacement.jpg>

Pre-operative Preparations

1. Good hygiene can prevent surgical wound infection. Therefore, we advise you to clean up yourself on the day of operation.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia. Please inform doctor if you are taking medications that affect blood coagulation such as Aspirin, Warfarin, Xarelto or Pradaxa, nonsteroidal anti-inflammatory drug (NSAID) such as Ibuprofen, Naproxen and Chinese medication.
4. Cigarette smoking may reduce your ability to heal. We strongly recommend you to quit smoking.
5. Routine pre-operative investigation such as blood test, ECG, X-ray and MRI may be performed.
6. Shaving of the incision site may be required.
7. No food or drink six hours before operation.
8. Please change into a surgical gown after removing all belongings including undergarments, dentures, jewellery and contact lenses.
9. Please empty your bladder before the operation.

Post-operative Instructions

General

1. After general anaesthesia, you may:
 - experience discomfort in the throat after tracheal intubation.
 - experience side effects of anaesthesia including feel tired, drowsy, nausea or vomiting.Inform the nurse if symptoms persist or worsen.
2. Please inform the nurse of wound pain. Proper pain relief treatment by injection or oral medication may be prescribed by the doctor.
3. Cryotherapy to the affected limb may be prescribed by the doctor to reduce pain and swelling.
4. The hospital stay is typically 1-7 days which may vary with your health condition.

Wound Care

1. The wound is covered with a sterile waterproof dressing with cast normally.
2. Keep the wound dry and clean. Follow doctor's and nurse's advice on wound care.
3. Stitches or staples will be removed in 2-3 weeks.
4. A wound drain may be present to remove fluid or gas from the area of surgery. It will be removed in 2-3 days after operation.

Diet

A normal diet may be resumed as instructed after recovery from anaesthesia. Intravenous infusion may be required to replenish fluid and electrolytes.

Activities

1. Early mobilization is encouraged as it enhances recovery after surgery. Please follow doctor's advice to resume light activities gradually.
2. Deep breathing and coughing exercise is encouraged to reduce respiratory complication.
3. Elevate the affected limb for a few days to help reduce swelling and/or pain.
4. The affected limb will need to be immobilized for a while. Please use the sling, crutches or wheelchair as directed.
5. Physiotherapist and occupational therapist may be referred for rehabilitation. You are recommended to participate in the tailor-made rehabilitation program in order to improve the chances of a full recovery.

Advice on Discharge

1. Please comply with the medication regimen as prescribed by your doctor.
2. Heavy lifting and vigorous exercises should be avoided for 3-12 months until the broken bone is completely healed.
3. Please keep the wound site clean and dry.
4. Prolonged bed rest can slow down blood circulation and increase the likelihood of developing deep vein thrombosis. Gentle physical exercise is strongly advised.
5. During your recovery, you will likely lose muscle strength in the injured area. Specific exercise will restore normal muscle strength, joint motions and flexibility. Therefore, please follow your physiotherapist's advice to continue exercising.
6. A diet rich in calcium and vitamin D will promote bone strength.
7. Immediately consult your doctor or return to hospital for professional attention in the event of severe wound pain, massive bleeding, drainage pus, loss of feeling and sensation at the surgical site, cold or turn paleness of the fingers or toes, cough, shortness of breath, chest pain, fast heartbeat, shivering, high fever over 38°C or 100.4°F, etc.
8. Any follow-up consultations should be attended as scheduled.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification