仁安醫院
UNION HOSPITAL

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Operation Information

Posterior Decompression and/or Spinal Fusion

Introduction

Posterior decompression is a major surgery aim at relieving pain and pressure on the spinal cord or nerve roots. An incision is made on the skin at the back over the involved region of the spine. Spinal fusion may be performed at the same time by using bone grafts and internal fixation devices to stabilize the spine.

Source:
https://www.spine-health.com/treatment/back-surgery/posterior-cervical-laminectomy

Indications

1. Degenerative conditions causing compression of spinal cord or spinal nerves
2. Instability of the spine
3. Spine fracture, dislocation or a combination of them
4. Spinal tumour
5. Spinal deformity
6. Miscellaneous conditions causing spinal cord or spinal nerve damage

Outcomes

The expected outcome of this operation is to relieve the pressure on the spinal cord or nerves, while maintaining as much of the strength and flexibility of the spine as possible.

Procedures

1. The operation is performed under general anaesthesia.
2. The skin incision is usually at the midline of the back of the body.
3. Spinal cord or nerve decompression is achieved by either laminotomy, laminectomy or foraminotomy, depending on the condition of the individual patient.
4. If spinal fusion is needed, bone graft may be harvested from the ilium, a rib or the spine to fill the defect at the spinal column (in special conditions synthetic material or allograft may be used).
5. Internal fixation device, e.g. screws and rods may be used to enhance stability and fusion.
6. The incision is sutured with stitches or staples and covered with a waterproof dressing.

Possible Risks and Complications

1. General Risks and Complications:
   - i) Excessive bleeding causing shock, stroke, heart attack, etc., which may be fatal if severe
   - ii) Deterioration of pre-existing medical problems, e.g. heart disease and stroke
   - iii) Delayed wound bleeding, haematoma formation and wound infection
   - iv) Problems in wound healing or persistent scar discomfort

2. Risks and Complications Specific to the Surgery:
   - i) Neurological deterioration. Depending on the operative site, the most serious neurological

complication is tetraplegia (in cervical spine surgery), paraplegia or cauda equine syndrome (in thoracic spine or lumbosacral spine surgery). Patient may lose ability to breathe with tetraplegia. The motor, sensory, autonomic, urinary, bowel and sexual function may be altered.

ii) Injury to the dura causing cerebrospinal fluid leakage or meningitis
iii) Malposition or breakage of internal fixation device
iv) Failure of bone union
v) Problems with iliac crest bone graft donor site such as wound infection, haematoma or persistent ache
vi) Spinal decompression alone may cause subsequent instability of the spine
vii) Recurrence or deterioration of the original spine condition

** 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.

Pre-operative Preparations

1. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
2. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia.
3. Cigarette smoking may reduce your ability to heal from spinal fusion. We strongly recommended you to quit smoking.
4. Routine pre-operative investigation such as blood test, ECG, X-ray and MRI may be performed.
5. Preparation of external supportive device for spine immobilization after surgery, e.g. neck collar, thoracolumbosacral orthosis may be needed.
6. Good hygiene can prevent surgical wound infection. Please take a shower including hair washing on the day of surgery. Nursing staff will assist you to clean the skin and perform shaving if necessary.
7. No food or drink six hours before operation.
8. Please change into a surgical gown after removing all clothing 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. Intravenous fluid replacement or blood transfusion may be necessary.
4. If there is an indwelling urine catheter inserted, it normally will be removed a few days later.
5. Passing stool and urine will be arranged in bed in the lying position.
6. You can be discharged home in 1-2 weeks after operation.

Wound Care

1. Please keep the wound dry and clean.
2. If wound drain is present, it would be removed in 2-3 days after operation.
3. Follow doctor's and nurse's advice on wound care.
4. Stitches will be removed in 2 weeks or dissolved in 3 weeks.

Activities

1. Early mobilization is encouraged as it enhances recovery after surgery. Please follow doctor's advice to resume light activities gradually.
2. Lower limb exercise is encouraged to reduce the risk of deep vein thrombosis.
3. Deep breathing and coughing exercise is encouraged to reduce respiratory complication.
4. Turning of body is usually allowed within few days after surgery and this will not affect wound healing.
5. Slowly increase your activity. When pain is getting less, sit out and then walking exercise will be started (please follow doctor's instruction). No sports, aerobic or cardio activities until 4-6 weeks post-operative visit with your surgeon.
6. Heavy lifting (not greater than 10lb), awkward twisting and leaning should be avoided for 3 months.
7. Put on external supportive device as advised.

Diet

In general, diet is allowed gradually on the day after surgery (Please follow doctor's instruction).

Advices on Discharge

1. Please comply with medication regime as prescribed by your doctor.
2. The wound may be still covered with waterproof dressing when you are discharged. Do not remove it unless you are told to do so. Always keep the dressing clean and dry.
3. Immediately consult your doctor or return to hospital for professional attention in the event of excessive bleeding, severe pain or signs of infection at your wound site such as redness, swelling, shivering, high fever over 38^{o}C or 100^{o}F, or any symptoms of deterioration of neurological function such as new numbness, tingling or weakness of limbs.
4. Any follow-up consultations should be attended as scheduled.

Possible Additional Procedures / Treatment

1. More extensive instrumentation and fusion than originally planned may be needed.
2. Dural tear may happen intra-operatively. Surgical repair and prolonged bed rest may be required.
3. Additional surgical procedures may be needed to tackle complications, e.g. debridement of wound infection, and evacuation of haematoma.
4. Future removal of the internal fixation device is not a routine but depends on factors of individual patient.
5. Additional surgery may be needed for recurrence or deterioration of the original spine problem.

Alternative Treatment

1. Anti-inflammatory medications
2. Steroid injections into the spinal area
3. Other therapy to treat the underlying causes
4. Physiotherapy
5. Occupational therapy

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.

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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