聖保祿醫院
St. Paul's Hospital

ZNAG_PIS99_P	(V1) Mar 2023

Procedure Information - Posterior Decompression and/or Spinal Fusion

Visit No.: Dept.:

Name: Sex/Age:

Doc. No.: Adm. Date:

Attn. Dr.:

Patient No.: PN

Please fill in / affix patient's label

Introduction

This is a major surgery which utilizes a skin incision at the back of the body to approach the spine. Spinal fusion is surgery in which one or more of the vertebrae of the spine are united together or fused so that movement between them can no longer occur. Bone grafts are placed around the spine during surgery and the body then heals the grafts over several months.

Indications

1. Degenerative diseases with significant functional or neurological deficit e.g. spinal stenosis, degenerative spondylolisthesis.
2. Miscellaneous conditions causing spinal cord compression e.g. ossification of posterior longitudinal ligament or yellow ligament, spinal infection.
3. Spine fracture, dislocation or a combination of them.
4. Neoplastic diseases e.g. spinal metastasis causing spinal cord compression in patients with reasonable life expectancy.
5. Spinal deformity due to a wide range of pathologies.
6. Inflammatory diseases leading to severe spinal instability or spinal cord compression.

The Procedure

1. The operation is performed under general anaesthesia.
2. The skin incision is usually in the middle part at the back of the body.
3. After mobilization of the paraspinal muscles, the posterior aspect of the vertebrae are exposed.
4. Spinal cord or nerve decompression is achieved by either laminotomy, laminectomy or foraminotomy.
5. If the surgeons intend to do spinal fusion, they need to lay down bone graft on the spine. Autogeneous bone graft or allograft may be used.
6. Screws and rods are the commonest instrumentation system nowadays, but hooks, cables or wires may be used. Most internal fixation devices are made of titanium and they are MRI compatible.

Risk and Complication

1. There are always certain side effects and risks of complications of the procedure. Medical staff will take every preventive measure to reduce their likelihood.
2. Surgical instruments or implant may be broken off and retained at the surgical site during operation.

A. Anaesthesia

1. Most spinal surgery is done under general anaesthesia.
2. Please ask the anaesthetist for details of anaesthetic complications.

B. In General

1. Excessive bleeding causing shock, stroke, heart attack, etc., which may in turn leading to death.
2. Injury to the dura causing cerebrospinal fluid leakage or meningitis.
3. Delayed wound bleeding, haematoma formation and wound infection.
4. Problems in wound healing or persistent scar discomfort.
5. Deterioration of pre-existing medical problems, e.g. heart disease and stroke.
6. Loosening or breakage of internal fixation device.

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7. Failure of bone union.
8. Problems with iliac crest bone graft donor site such as wound infection, haematoma or persistent ache.
9. Bone removal causing instability of the spine.
10. Recurrence or deterioration of the original spine condition.

C. Risk specific to operative site

1. Cervical spine surgery
    1. Injury to the vertebral artery causing stroke.
    2. Injury to the cervical cord or nerves causing neurological damage, in extreme case may lead to tetraplegia, double incontinence and breathing difficulty.
2. Thoracic spine surgery
    1. Injury to the lung causing pneumonia or pneumothorax
    2. Injury to the aorta or vena cava causing torrential bleeding.
    3. Injury to the thoracic cord or nerves causing neurological damage, in extreme case may lead to paraplegia, double incontinence and breathing difficulty.
3. Lumbosacral spine surgery
    1. Reflex slowing of bowel movement causing abdominal distension and vomiting.
    2. Injury to the spinal nerves causing neurological damage, in extreme case may lead to paraplegia, double incontinence.

Possible additional procedures

1. More extensive instrumentation and fusion than originally planned may be needed.
2. Dural tear may happen intra-operatively require repair and prolonged bed rest post-operatively.
3. Additional surgical procedures may be needed to tackle complications, e.g. debridement of wound infection, evacuation of haematoma.
4. Future removal of the internal fixation device if necessary.
5. Additional surgery may be needed for recurrence or deterioration of the original spine problem.
6. Catheterization of bladder or Ryle's tube insertion may be performed.

Before the Procedure

1. You will need to sign a consent form and your doctor will explain to you the reason, procedure and possible complications.
2. Blood tests, X-ray, correct and optimizing existing illness e.g. diabetes, asthma.
3. Optimization of pre-existing medical conditions, e.g. heart disease, hypertension, diabetes mellitus, anaemia, asthma, etc.
4. Fast for 6-8 hours before the operation.
5. Measurement of external supportive device for spine immobilization after surgery, e.g. neck collar, may be needed.
6. Inform your doctor of any medical condition and any medications you are taking. The medications may need to be adjusted as appropriate.
7. Cleaning of the operative site. Shaving of hair may be needed.

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After the Procedure

A. Hospital Care

1. Usually diet is not allowed on the day after surgery.
2. Analgesics will be prescribed for better pain control and facilitates rehabilitation.
3. Passing stool and urine will be arranged in bed in the lying position.
4. Pre-operative practice is beneficial. Sometimes a urinary catheter is used for monitoring and convenience. Usually it will be removed in a few days.
5. Lower limb exercise is encouraged to reduce the risk of deep vein thrombosis.
6. Intravenous fluid replacement or blood transfusion may be necessary.
7. Turning of body is usually allowed within few days after surgery and this will not affect wound healing.
8. When pain is getting less, sit out and then walking exercise will be started.
9. Usually patient can be discharged in 1-2 weeks but depend on individual situation.

B. Home care after discharge

1. You should keep your wound clean and dry.
2. Follow up on schedule as instructed by your doctor
3. Contact your doctor or go back to hospital if excessive bleeding, collapse, severe pain or signs of infection at your wound site such as redness, swelling or fever (body temperature above 38℃ or 100℉) occurs.

Alternative Treatment

Conservative treatment including physiotherapy and occupational therapy, result depends on individual patient and disease.

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.

Reference

Hospital Authority – Smart Patient Website

I acknowledge that the above information concerning my operation/procedure has been explained to me by Dr. _____. I have also been given the opportunity to ask questions and receive adequate explanations concerning my condition and the doctor's treatment plan.

Patient / Relatives Name	Signature	Relationship (if any)	Date