

Posterior Decompression and/or Fusion of the Spine

Introduction

This is a major surgery which utilizes a skin incision at the back of the body to approach the spine

Indication

- Degenerative conditions causing compression of spinal cord or spinal nerves,
- e.g. intervertebral disc prolapse, spinal stenosis
- Instability of the spine
- Spine fracture
- Spinal tumour
- Spinal deformity
- Miscellaneous conditions causing spinal cord or spinal nerve damage

The Procedure

- The skin incision is usually in the middle part at the back of the body
- Surgery is performed depending on individual patient
- Bone graft harvested from the ilium may be needed to fill the defect at the spinal column to enhance fusion (in special conditions synthetic material or allograft may be used)
- May use internal fixation devices such as metal rods and screws if necessary

Risk and Complication

1. Anaesthesia

Most of the time the surgery will be done under general anaesthesia, please ask the anaesthetist for details of anaesthetic complications

2. General

- Excessive bleeding causing shock, stroke, heart attack, etc., which may in turn lead to death
- Injury to the dura causing cerebrospinal fluid leakage or meningitis
- Delayed wound bleeding, haematoma formation and wound infection
- Problems in wound healing or persistent scar discomfort
- Deterioration of pre-existing medical problems, e.g. heart disease and stroke
- Loosening or breakage of internal fixation device
- Failure of bone union
- Problems with iliac crest bone graft donor site such as wound infection, haematoma or persistent ache
- Bone removal causing instability of the spine
- Recurrence or deterioration of the original spine condition

3. Specific to Operative Site

A. Cervical spine surgery

- Injury to the vertebral artery causing stroke
- Injury to the cervical cord or nerves causing neurological damage, in extreme case may lead to tetraplegia, double incontinence and breathing difficulty

B. Thoracic spine surgery

- Injury to the lung causing pneumonia or pneumothorax
- Injury to the aorta or vena cava causing torrential bleeding
- Injury to the thoracic cord or nerves causing neurological damage, in extreme case may lead to paraplegia, double incontinence and breathing difficulty

C. Lumbosacral spine surgery

- Reflex slowing of bowel movement causing abdominal distension and vomiting
- Injury to the spinal nerves causing neurological damage, in extreme case may lead to paraplegia and double incontinence

Before the Procedure

- Optimization of pre-existing medical conditions, e.g. heart disease, hypertension, diabetes mellitus, anaemia, asthma, etc.
- Measurement of external supportive device for spine immobilization after surgery, e.g. neck collar, may be needed
- Blood tests and x-rays of the appropriate regions
- Fast for at least 6 hours before surgery
- Cleaning of the operative site. Shaving of hair may be needed

After the Procedure

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

Possible Additional Procedure

- More extensive instrumentation and fusion than originally planned may be needed
- Dural tear may happen intra-operatively require repair and prolonged bedrest post-operatively.

- Additional surgical procedures may be needed to tackle complications, e.g. debridement of wound infection, evacuation of haematoma
- Future removal of the internal fixation device if necessary
- Additional surgery may be needed for recurrence or deterioration of the original spine problem

Alternative Treatment

- Conservative treatment including physiotherapy and occupational therapy
- Result depends on individual patient and disease

Follow Up

- You should keep your wound clean and dry
- You must follow instructions strictly on taking medication, see the doctor as scheduled
- If you have any excessive bleeding, collapse, severe pain or signs of infection at your wound site such as redness, swelling or fever, see your doctor immediately or attend the nearby Accident and Emergency Department

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.