



# Cervical laminectomy

## Introduction

The discs in the neck lie between the vertebrae at the front of the spine which together form the cervical spine. The nerve roots coming out of the spine pass very close to the disc through holes in the spine called foramina. Sometimes due to “wear and tear” of the spine, the disc becomes weakened allowing the disc to bulge. The body tries to repair this weakened area by forming additional bone called “osteophytes”. If these disc bulges or bony spurs press on the nerve roots, the nerve can be irritated and becomes painful. Nerve pain is usually felt along the path of the nerve, which varies depending on which nerve root is affected and usually travels to the shoulder and the arm. Nerve pain is often very difficult to control with pain killers.

Sometimes the ligaments at the back of the spine can hypertrophy and press on the spinal cord, it can cause damage to the internal structure of the spinal cord called “cervical myelopathy” – this results in numb and clumsy hands and stiff legs with parasthesias (typically a sensation of walking on cotton wool). This can affect the mobility and progress to weakness affecting all four limbs. In the event of an injury to the neck, instant paralysis can occur which may be slow to recover if at all. This process is usually slowly progressive and surgery is aimed at halting this progression.

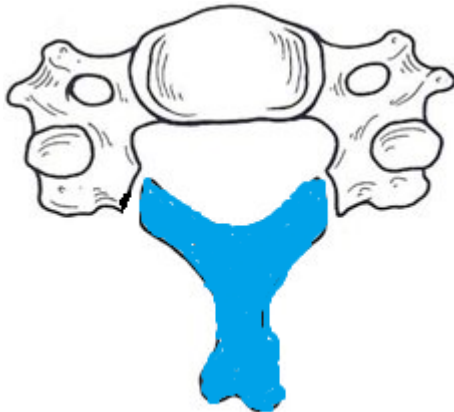
The symptoms from the cervical spine problems involve a combination of neck pain, loss of function and weakness and numbness. Rarely bowel and bladder function can be affected. If neurological symptoms like weakness or bladder/bowel symptoms are experienced they should be reported immediately as they may require urgent treatment.

## What is a Cervical laminectomy?

Cervical laminectomy is a spinal operation performed under general anaesthesia from the back of the neck designed to take away the compression on the spinal cord and bony spurs which are irritating the nerve and/or the spinal cord resulting in resolution of the arm pain and prevent worsening of cervical myelopathy if present. The procedure is performed using a small incision in the back of the neck in the midline. The spine is approached by separating the muscles and attached ligaments and the part of the bone called the lamina is removed to free up the spinal canal and the foramina. The nerves and the spinal cord are free at the end of the procedure. Sometimes if the structural support of the spine is weak your surgeon may insert some screws and rods to hold the bones firmly in position. The bone along with some artificial material is placed along side the screw/rod construct to promote a bony fusion and to add further strength to the spine.

A microscope is sometimes used to improve light and vision enabling a minimal access approach to be used and to enable the surgeon to perform the operation safely. In case of pressure on the spinal cord, the aim of the operation is to prevent worsening in the future.

The wound is closed with absorbable sutures leaving a short scar with no cross hatching and no need for suture removal. Occasionally the suture ends do require trimming. A drain (small plastic tube) is sometimes left in the neck as a precaution to prevent a blood clot forming in the neck and is removed on the day after the operation.



*Fig.1 : A cervical vertebra (one of the seven bones which form the cervical spine) showing the part of the bone removed from the back of the neck called the "lamina".*

## **Post operative course**

After the operation you will be encouraged to mobilize as soon as possible with the assistance of physiotherapists and nurses. Once mobile enough to manage at home you can be discharged. Sometimes a soft collar will be prescribed for neck support.

You will be given instructions with regard to ongoing mobilization and physiotherapy. An outpatient appointment will be arranged.

## **Outcomes**

The outcome of any surgery cannot be guaranteed. Most patients experience a dramatic reduction in arm pain. Improvement in numbness and weakness due to irreversible spinal cord damage if present is less certain. Occasionally there may be restriction of neck movements due to the fusion especially if it is at multiple levels.

In order to monitor the results of surgery you will be asked to complete outcome questionnaires from time to time.

## **Possible Complications**

*Most patients are pleased with the result of their surgery and do not suffer any adverse problems. Occasionally complications do occur and can require further treatment.*

Scars in the neck usually heal very well but can sometimes have a cosmetic impact. We make every attempt to make the scar as less visible as possible and use absorbable subcuticular stitches to prevent any stitch hole scars.

Neck pain can occur and is usually temporary and recovers well as the swelling from the operation settles but can rarely be permanent. It may occasionally require further surgery.

Nerve damage is rare during surgery. If it occurs it can cause areas of numbness, pins and needles and weakness. Neuralgic pain can also be troublesome. Painkillers acting on neuropathic pain are prescribed and usually provide some relief to the pain.

Spinal cord injury is very rare and occurs when the spinal cord is damaged. This can result in paralysis from the neck downwards.

Scar tissue can form around the nerve root tethering the nerve causing ongoing pain. Occasionally further surgery is required to free up the nerve either from the front or from the back of the neck. Painkillers acting on neuropathic pain are prescribed and usually provide some relief to the pain.

Infections can occur in the wound. These can be treated usually with antibiotics but occasionally require surgical cleaning and debridement.

Recurrence of the arm pain can occur and may require further surgical procedures on the neck.

Damage to the lining of the nerve root/ spinal cord (Dura) can result in a leak of fluid (CSF). This is usually noticed and repaired at the time of surgery. A short period of bed rest is advised after the operation. Occasionally a drain may have to be left in the back to allow the leak to seal itself. Rarely the leak persists and has to be repaired surgically.

Cervical Kyphosis is the name given to the problem of having a forward bending spine in the neck usually at the level above or below the operated levels due to loss of structural support to the neck in the years following surgery and is rare. It causes similar symptoms of the type as described above called cervical myelopathy and may cause increasing neck pain. It may require further surgery with screw and rod or cage and plate insertion.

Bleeding, most commonly from the small veins within the spine can be troublesome and is controlled at the time of surgery. Rarely bleeding continues post operatively and a second procedure is required to control it.

Neuralgic pain occasionally persists after surgery despite a successful operation and is thought to be due to inflammation, damage and fibrosis inside the nerve itself. This can not be treated surgically.

Anaesthetic complications will be explained by your anaesthetist.

Please be assured that every effort is made to avoid the complications listed and any others which can very rarely occur.

## **Questions**

If you have any questions or wish to discuss things further please ask at any time. It is important that you have all the information you require and we will assist you in every way possible.

**MR ABHINAY KAMAT**

**Consultant Spinal Neurosurgeon**