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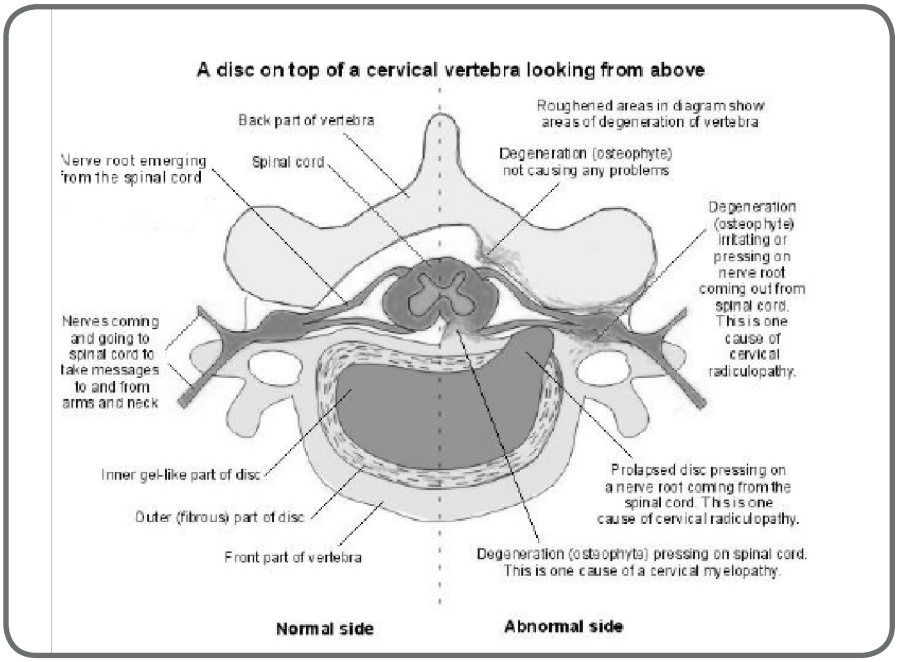
Information for patients undergoing Cervical (neck) surgery (Anterior and Posterior Approach)

Welcome to web site. This booklet aims to give you and your family information about your forthcoming spinal operation. It is intended to answer most of the common questions regarding your recovery, going home and returning to normal activities.

Prior to signing a consent form you have an opportunity to ask questions and to discuss your concerns me. After the operation should there have been any variation on the original operation the doctor will inform you.

Spinal anatomy

The intervertebral disc is firmly bonded to the vertebrae both above and below. The disc is a specialised joint which permits the spine to bend and twist. The disc has a tough fibrous outer casing and a softer water filled jelly-like interior. Running through the spinal column is the spinal cord, which contains nerves that come from the brain. Nerves from the spinal cord come out from between the vertebrae and send and receive messages to and from various parts of the body. The true spinal cord ends at approximately the L1 level.
A collection of nerve roots at the end of spinal cord is called the “cauda equina,” (means horse’s tail).



The following conditions may contribute to your symptoms:

Degeneration:

This is 'wear and tear' of the spine. With age the disc loses water and the composition of the disc alter. This is normal and happens to us all. The reduced height of the disc leaves less space for the nerves and may cause one or more spinal nerve to be trapped.
Osteophytes (bony outgrowths or ridges) can form at the edges of the vertebrae and may cause narrowing in the spinal canal. As degeneration persists, signs and symptoms may develop. Symptoms can include: pain down the arm or into the hand, pins and needles and numbness.

Spinal Stenosis:

This is narrowing of spinal canal through which the spinal nerves pass and therefore pinches one or more nerve root. This could occur as a result of degenerative process or osteophytes (bony outgrowths or ridges) can form at the edges of the vertebrae and may cause narrowing in the spinal canal. Other causes include inflammatory arthritis, trauma, previous surgery and other birth defects.

Disc prolapse or protrusion:

The outer wall of the disc becomes weakened and can deteriorate with age or as a result of excessive loading. The prolapsed disc bulges out and starts to irritate spinal nerves supplying your arm. The term "slipped disc" is misleading in that the disc cannot slip out and cannot be pushed back in. Conservative treatment that does not involve surgery, avoiding painful activity, painkillers and physiotherapy, can sometimes be enough to improve symptoms. We only offer you surgery if this type of treatment is proven to be unsuccessful or unlikely to be successful. Symptoms of a trapped spinal nerve include: neck, shoulder and/or arm pain, pins and needles, numbness, muscle weakness in your shoulder, arm and hand

Cord Compression:

Any one of the above problems could put pressure directly on the spinal cord. The symptoms are similar to those described above but can also include muscle wasting (loss of muscle bulk), difficulty in walking, balance disturbances or unsteadiness and weakness in your legs.

What investigations do I need?

Although, complaints and examination findigs are very important for diagnosis and treatment, a MRI scan is performed to confirm the diagnosis and to identify the level of the problem. After the surgery decision is made, you will be given detailed information about what the problem is, how the surgery will be performed, the foreign implants that are thought to be placed in your body during the surgery, complications that may occur, your healing process and the restrictions that may occur in your post-operative life, and you will have a ***"consent form"*** signed that you accept the surgery.
The blood tests, a nasal swab to screen for coronavirus , electrocardigraphy, chest X-Ray and if it is necessary spine X-Rays are performed at one day before the operation. Anesthetist decide if you are suitable to undergo anaesthesia.

What are my treatment options?

Maintaining an ideal body weight, exercises to improve posture, also strengthen spinal muscles should accompany surgical or conservative treatment.

Conservative treatment such as physiotherapy, painkillers and the passage of time may reduce the symptoms. Nerve root block injections are sometimes useful procedures and treatment for neck and arm symptoms.

Cervical surgeries

These procedures are preformed under a general anaesthetic.

Cervical decompression/discectomy:

This is widely used term whereby the pressure is taken off from one or more nerves/spinal cord. Different terminologies are used for decompression based on the anatomical area that is being decompressed.

Anterior cervical decompression with fusion:

The incision is from the front, just to the side of your throat. The surgeon will stabilise the vertebrae either using an interbody spacer 'spinal cage', or using a bone graft taken from your hip. Sometimes a plate and screws are placed to hold and align the bones.

Anterior cervical decompression with joint:

The incision is from the front, just to the side of your throat. The surgeon will use an artificial joint to replace your removed disc.

Posterior Foraminotomy:

The incision is through back of the neck. The nerve root is decompressed where it passes through the spinal foramen.

Posterior Laminectomy:

Incision at the back of th neck. The entire lamina is removed from back of vertebra.

Posterior Cervical Fusion:
The incision is from the back of the neck. The surgeon uses metal work (screws and rods or wiring) to fuse the cervical bones to the skull or other cervical vertebrae.

Posterior laminoplasty:
The incision is made at the back of the neck. Without laminectomy, an incision is made on the bones of the back of the spine, special metal plates are placed between them, and the spinal canal is widened while preserving the anatomical structures as much as possible.

What are the risks associated with cervical spinal surgery?

Swallowing difficulties or changes to voice:
You may have experienced some swallowing problems before you had your operation. For operations involving anterior approach (front of your neck), your oesophagus (food tube), trachea and larynx (voice box) have to be retracted to one side during the operation. Following this, some patients experience temporary problems with swallowing, voice problems or breathing difficulties due to bruising or swelling. These problems often improve within weeks, but if they persists you will be referred to the speech and language therapist and if necessary a dietitian. Sometimes you may be given a short course of steroids to help reduce any swelling.

Bleeding:
Bleeding from the veins around the nerve and rarely require blood transfusion. Sometimes a small drain placed in wound which will be removed after 12 hours.

Wound infections:
Generally infection rate is around 5-8%. However infections can range from minor to moderate and include redness, tenderness, improper healing or wound gaping, raised temperature. Usually it is easily treated with antibiotics.

Other types of infections like urinary tract infection and chest infections can spread towards your wound with blood circulation. Again these infections easily treated with antibiotics.

Deep vein thrombosis (DVT):
During the weeks following surgery there is a risk that out of 100 patients between 5 and 10 may develop a blood clot in your leg as you have reduced mobility for a short period of time during and after the operation. You will be asked to wear elastic stockings before the operation this may be used in the post-op phase until you are able to mobilise.

It is essential to perform deep breathing exercises to prevent any respiratory problems. Also get out of bed as soon as advised by your surgeon. Should you remain in bed after a period more than 24 hours or have reduced mobility we may prescribe a blood thinning injection until you are discharged from hospital.

Pulmonary Embolism:
Occasionally a clot can break off from DVT and passes to the lungs via the heart causing pulmonary embolism in 1 in 1000 of patients who undergo surgery. This is a life threatening complication and needs immediate treatment.

Nerve damage:
Nerve damage can occur during the operation; however, this is classed as low risk in less than 1 in 100 of patients. It can result in numbness and/or pins and needles and in rare cases significant damage to bladder and bowel function, or paralysis.

Paralysis:
Although total paralysis with these types of surgeries is extremely rare, it can occur. The risk is less than one in thousand.

Dural tear:
The spinal cord is lined by three layers one of those layers is called the dura, which can get punctured during the operation. This then results in leakage of spinal fluid. It can occur in 3 to 5 out of 100 patients generally undergoing spinal surgery but it is rare in cervical spine surgery. You may be advised to undertake a period of bed rest for 48-72hours and you may experience severe headache, wound leakage of clear fluid or wound swelling. Occasionally repeat surgery is required.

Are there any other potential complications?

Fortunately most complications can be treated and although they are inconvenient and cause setbacks there are no long-term consequences.

Bladder hesitancy:
Anaesthesia can sometimes affect the bladder control and this can lead to urinary retention. Patients may be catheterised short term and if subsequently are unable to successfully pass urine normally they may be sent home with urinary catheter and referred to the urology specialist.

Constipation:
Some of the analgesics can cause constipation. It is important you are able to empty your bowel daily to avoid straining as it can increase your back pain and affect your bladder emptying. Daily walking, exercises, fibre rich diet, oral laxatives can help if bowels are not open for 3 days after which sometimes you may need a medicine.

Before surgery

What time should I starve for the operation?
It is safe to stop eating and drinking (including chewing gum) at 12 midnight. If you use regular medication for high blood pressure in the morning, you must take your medication with a 2-3 drop of water at 6 or 7 am. Please do not consume alcohol for twenty four hours prior to surgery.

What medication can I take prior to surgery?
It is important that you continue to take your painkillers leading up to and before the evening of surgery. If you use regular blood diluating medication, I will give you an order to you when you must stop it before the surgery.

If you are using the medicine for diabetes regularly, do not take it on the morning of surgery. If you are using insulin, take the evening dose, you will be given treatment after blood sugar control when you go to the hospital in the morning.

Estrogen containing contraceptive pills and HRT are usually stopped 4-6 weeks prior to surgery to reduce the risk of thrombo-embolism during surgery.

Herbal medications may need to be stopped one week prior to surgery due to lack of evidence about adverse interactions with a general anaesthetic.

After surgery you will be informed when to restart these medications.

After surgery

Will I experience pain?

Most cervical microsurgery is undertaken to relieve arm pain and associated symptoms. Good relief from arm pain occurs in approximately 90-95% of patients. Wound pain can last for 2-3 days. Patients can continue to have discomfort and their symptoms as pre-op for some time following surgery, however this is expected whilst your body is healing. A prolonged sore throat can last up sometimes to one month, but usually subsides long before this time. Some patients can also experience pain across the shoulder blades and neck because the muscles have been stretched during the operation. You can begin to reduce your pain killers when you feel the pain is settling. If you are concerned or have new symptoms then please contact the me.

What tablets will I take after surgery?

I will write you prescriptions when you are discharged from the hospital and give you information on how to use them.

Seek advice from your GP if you have constipation for more than three days after taking the laxatives. At the time of stopping medications such as opiates, Gabapentin, Amitriptyline etc we strongly advise you to slowly taper them off in small doses over a period of time to minimise withdrawal effects.

When will I be discharged home?

The estimated discharge time following routine anterior cervical microsurgery is 1 to 2 days, depending on your post operative recovery and your home circumstance. The discharge time is sometimes 5-7 days after posterior approach surgery. You will be reviewed on the next day of your operations by your surgical team, who will make sure you do not have any complications. An x-ray may be performed to look at the neck alignment prior to discharge, this happens following all anterior approach surgeries. When this x-ray has been checked you will be discharged home.

What should I be aware of while recovering from my operation?

Recovery after your operation may be gradual; you will not get better overnight. You may experience “off” days where you appear to be in discomfort, do not despair - this is normal. If you experience any of the below you must contact me immediately:

- Constant pain which gets worse
- Exisiting numbness gets worse (or new numbness)
- Muscle weakness
- Change in bladder function

When should I get my wound checked?

I will give you detailed information about wound care and when you can take a bath before discharge. It is important to inspect your wound to ensure good healing is taking place, looking especially for any gaping, leaking, swelling or redness.

How long will my wound take to heal?

Wound healing goes through several stages. You may experience tingling, numbness or some itching around the wound. The scar may feel a little lumpy as the new tissue forms and it may also feel tight. These are all usual features of the healing process. Do not be tempted to pull off any scab which acts as a protective layer as it can delay wound healing and introduce infection. Please note scarring is expected.

If you develop any redness, swelling, wound opening or discharge please contact me immediately who may wish to refer back to us.

When will I be able to drive?

We recommend you drive around 4 weeks later when you feel able to control your vehicle safely including executing an emergency stop. Your surgeon may give you independent advice, please follow their instructions if different from this sheet.

Will I need to wear a collar?

As a routine practice we advise collar use after anterior or posterior cervical surgery. You will be given direction on how long you will need to wear it. Some surgeons may ask you to replace with a soft collar at night or when you are resting in bed. If necessary, it may be recommended to use an orthopedic pillow with neck support.

If you are supplied with a collar you must wear it at all times, even whilst bathing and washing your hair. You should wear collars firmly but not excessively tight, as this will make it difficult for you to swallow or breathe. If you find it difficult to raise your arms above your head to fasten the collar at the back, please ask family members or friends for help. You need to maintain a good posture while wearing your collar, carrying your head directly above your shoulders with your chin tucked in and your shoulders relaxed. If you have any concerns about your collar please contact me.

When will I be able to return to work?

This will depend to some extent on age, duration of pre op symptoms, level of fitness, other medical conditions, operation technique and the nature of your work. Generally most patients make an uncomplicated recovery and return back to light work in 4 weeks. If your work involves heavy activities, this may mean that you will not return to work until 8 weeks.

When will I receive a follow-up appointment?

You will recieve an apointment to my check on your progress and wound healing status 4 weeks following discharge. In the first 3 months, you should be examined and radiologically checked every month. If you live far from where I am, you can contact me and find out which radiological examination you should have. When you come for the control, come with the radiological examination you have done at your location.
Then, until the end of the first year, you should come for a check-up every 3 months. Your follow-up and controls will continue for three years.

Exercises and advice from your Physiotherapist

Exercise is a vital part of your rehabilitation following your surgery and will improve your general fitness and wellbeing. It is essential that you regularly get up and walk for short distances to ensure movement of your blood circulation and prevention of future complications. Do continue to progress your walking distances and increase your exercise tolerance over the first few weeks post op.

I will give you exercises according to the technique of the surgery performed and the condition of the spines and implants in your controls. However, the time to start the exercises is different for each technique and I will keep you informed about it.

Suggestions on daily activities

It is important to remember that regularly changing position will help to prevent muscles from tiring and allows your joints to move, which is essential for their nutrition.

Posture: Posture is not just a matter of adopting good positions, it is concerned with the way you move as well. Ideally carrying out all necessary activities in a relaxed and efficient way minimises the stresses on your body and saves energy.

Lying down: Do not lie in the prone position. Whether you lay on your back or your side, please use soft or ortohopedic pillows so that they conform well to the shape of your head and neck. If you sleep mostly on your sides, the thickness of your pillow should match the width of you shoulder.

Sitting: It is important to maintain the hollow in the small of your back while sitting as this will help to ensure a good position for your shoulders, head and neck. You can use a lumbar roll or a small cushion at your beltline to maintain this position, and you should ensure that you sit well back in the chair. Sustained slumping in a chair is not a good position and puts an abnormal strain on your spinal ligaments, joints and discs.

Walking: Walking is a good exercise. It promotes fitness, improved circulation and general strength. Physically, if you had no walking restriction before surgery this should remain un- altered.

While working at a desk: there are many factors which can impact on the health of your neck and the rest of the spine e.g. P.C. monitors should be positioned in front of you rather than to the side and the monitor positioned so that the head is held upright or just slightly flexed and the top of the monitor at or slightly below eye level. Desk surfaces and armrests that are too low or high can cause awkward postures (e.g. hunched shoulders), that impact negatively on the health of the neck and rest of the spine. Hands, wrists and forearms should be relatively straight, in line and parallel to the floor. When using the telephone hold the receiver rather than placing it on your shoulder. Consider a hands-free set or speakerphone if you use the telephone a lot.

Sex: You can resume sexual activity when you feel comfortable. You can adopt whatever position you prefer, but we recommend either lying on your side or on your back.

I WISH YOU GET YOUR HEALTH AS SOON AS POSSIBLE…

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Professor