



Coccygeal Denervation

1 Introduction

Before you agree to have your coccygeal denervation, it is sensible to know all you can about it. This means knowing why you may need coccygeal denervation, what the procedure is, and what it will be like, if there are any risks, and if there are any alternatives. Even if you are not keen on the details, getting an overall picture is helpful.

This leaflet is a good starting point. It does not cover everything, so do mention any particular worries you may have. Ask for more information at any time. Patients, their pain problem and treatments all vary to a degree. But the leaflet should help you make the best decision.

You will need to sign a consent form. This will happen just before the procedure at the hospital. This consent form records what you have agreed to. It is flexible enough to cover the unexpected. Please make sure everything is quite clear to you. Mention anything you do not wish to have done. You can change your mind even after signing the consent form.

What is coccygeal denervation?

The coccyx is the remnant of fused vertebral bones often referred to as the "tail-bone". With injury or simple 'wear and tear' the coccyx can become painful. Before coccygeal denervation is considered, you will usually have undergone coccygeal nerve infiltrations to confirm the diagnosis.

Denervation of the coccyx is used to treat pain in that area. The technique is used to destroy the little nerves that supply the coccyx. The membrane on the coccyx called periosteum can become inflamed and cause pain. This pain can lead to muscle spasm or tightness, again in the low back or buttocks, which can produce even more pain and immobility.

The technique involves identifying the nerves that send pain messages from the coccyx to the brain. If these nerves can be broken then the pain messages are not received and the pain is therefore reduced.

What is the problem?

You have a painful coccyx. Pain may be felt deep between the buttocks and is worse after sitting for any length of time. Particular movements also increase the pain. This pain can also be worse when you extend the spine. The pain is usually reduced by gently keeping on the move.

Sometimes the pain may be 'referred', or 'spread' to other areas, higher up the lumbar spine.

What has gone wrong?

You have suffered damage to the coccyx at the base of your spine. When the coccyx is inflamed, the nearby muscles become irritated and go into spasm or cramp up. Movement is then reduced.

The aim

The aim is to break the nerves that send pain messages from the coccyx to the brain. This reduces the spinal pain experienced. Any pain or spasm in nearby muscles pain should also be reduced.

Are there any alternatives?

By the time that you are having the coccyx denervation you should have already had some simple injections and other more simple treatments. These include rest, both pain-killing and anti-inflammatory tablets and supportive chairs and cushions.

What if you do nothing?

If you do nothing there are several things that may happen:

1. With time and rest the pain may settle on its own.
2. The pain and difficulty in moving around may remain the same.
3. The pain may increase and spread to other parts of the spine.
4. Your posture may get worse, making walking, sitting and sleeping more difficult.

Who should not have the coccygeal denervation done? (Contraindications)

Each patient has the final decision to proceed or not. If you are unhappy about the procedure for any reason, you should not continue. There are specific medical situations when coccygeal denervation should not be done and they are as follows:

1. Medication or an illness that prevents the patient's blood from clotting.
2. Infection of the skin over the site where the needle needs to be put in.
3. If you feel unwell generally, perhaps with viral symptoms and particularly if you have a active cough.
4. Patients who have metal implants in their body. Under certain circumstances, this problem can be overcome, but you will need to discuss this with your doctor.
5. People who have an implanted pacemaker to control their heart rate. This can be overcome, but needs to be in conjunction with your cardiologist, since the Pacemaker may need to be re-programmed.

2 Preparation**Getting ready - At home**

The procedure is usually planned in advance. It is important to contact your medical insurance company, if you have one, to confirm that they will authorise the procedure. Make sure that you know what time and where in the hospital you must report to on the day of the procedure to avoid being late. Bring all your medicines, tablets and inhalers in their original packets with you.

Have nothing to eat or drink in the 6 hours before the procedure, this is to keep your stomach empty and stops you feeling nausea during the procedure. This is also a routine safety procedure when sedating drugs are given to patients in a drip. If you are on regular tablets, take them as normal, with a small amount of water.

If you are on Warfarin, Aspirin, or any drug that thins the blood, please ring me or Nicola to discuss this before your injection.

In most hospitals this procedure is a 'day-case' procedure and you can go home afterwards. You will need a friend or relative to take you home afterwards and it is advisable to avoid public transport. In most hospitals this procedure is a 'day-case' On occasion you may need to stay in the hospital overnight.

Getting ready - In hospital as a planned procedure

Coccygeal denervation takes place in a special day unit within the hospital. This is where there is an operating theatre, with access to an x-ray machine.

When you arrive, please report to the unit's reception, where one of the nurses will ask you some questions to check your health and give you a hospital gown to change into.

When I am ready, you will be taken to the procedure room. I will explain what will happen and ask you to confirm your signature on a consent form. A special x-ray machine may be used to help me place the needles. For this reason it is important to tell me if you may be pregnant, as x-rays may harm a growing baby. In addition a dye may be injected that contains iodine, to show that the needle is correctly placed. If you have an allergy to iodine, tell me or the nurse.

3 The Coccygeal Denervation Procedure

The anaesthetic

The coccygeal denervation does not require a general anaesthetic. Quite often light sedation is given into a vein. Most people undergo the procedure with the use of local anaesthetic in the skin only.

The procedure

Once in the theatre suite you will be connected to some monitoring equipment to measure your heart rate, blood pressure and the oxygen content of your blood. This is strictly only required when you are having sedation. A needle or 'drip' will often be placed in a vein, usually in the back of the hand. Then you will be asked to lie face down on your tummy

Being in a comfortable position is very important when this procedure is done.

When this is achieved your back will be cleaned with antiseptic solution, some local anaesthetic will be introduced into the skin. When the skin has gone numb a needle will be introduced into the back very slowly and carefully. Once the needle is in the correct place next to the coccygeal nerve, a device will be passed through the needle.

A special machine will then pass a small electrical current into the nerve that sends messages from the coccyx. A test will then be performed. A current will be passed through the needle. This may make the small muscles on the back contract, which is expected. I will want to know if you get any strange sensations in your leg. If you do, this may mean that the needle is in the wrong place and needs to be repositioned.

The x-ray machine will also be used to check the position of the needle. When all is correct some 'local' anaesthetic will be put on the nerve to make it go numb. When this is working the machine will pass a third current through the needle to heat it up and break it. This takes a minute or two.

The procedure may be slightly uncomfortable but not very painful. If it is - tell me. Again it is important to tell me if you experience strange feelings down your legs. When the

denervation is completed, you will then be positioned in a way to make you as comfortable as possible.

How long does it take?

Coccygeal denervation usually takes about 20 - 40 minutes. With time in the recovery area, you are likely to be in the treatment area for an hour or so.

Will it hurt?

The uncomfortable part of the procedure is when the needle is placed through the skin and soft tissues at the very bottom of the back. I will usually inject local anaesthetic into the skin to make it go numb before pushing the needles through. The heating effect to break the nerves may also be slightly uncomfortable. In addition, it is possible to give small quantities of sedation into a drip to make you feel comfortable while this is happening. Apart from this, the procedure should be pain free.

4 Risks and complications**Common complications**

Coccygeal denervation is a commonly performed procedure but as with all medical procedures there are some risks.

Complications that are minor and occur quite frequently include:

- Bruising of the skin and under the surface.
- Feelings of nausea or sickness. These can be treated with anti-sickness drugs.
- Mild to moderate discomfort. This can normally be treated by giving small doses of pain-killers into the drip.
- A flare-up of your original symptoms for a few days. This is usually due to bruising where the needles go in.

Uncommon complications

- Infection. It is extremely uncommon but sometimes an abscess may form around a joint where a needle is inserted.
- Pain. Sometimes patients complain of worsening of their pain, or a new pain. It is difficult to explain this as there is rarely anything new to find on examination.
- You may suffer an allergic reaction to any of the medications.
- Nerve damage and weakness.
- Unexpected death.

What about the contraceptive pill and Hormone Replacement Therapy (HRT)?

In women, the pill may double the chance of deep vein thrombosis and possibly travelling into the lungs. The chance is small, possibly 1 in 500, for a clot in the lungs, but giving an exact figure is difficult. Many other things play a part, such as being over 40 years of age, being overweight, and blood clots in the past. Hormone replacement therapy (HRT) has the same effect, but less so.

This procedure does not require a general anaesthetic and so there is no additional risk to forming a clot. There is no need to stop taking the pill or HRT.

5 Recovery

Will it be painful?

You may feel a little stiff and uncomfortable from lying on the theatre trolley or table. The muscles around the treatment area may feel a little bruised. Simple painkillers will control this pain.

Recovery - In hospital

You will be taken from the theatre to a recovery area. The recovery nurse will take usual measurements of your pulse, blood pressure and rate of breathing to keep you safe.

The nurse will regularly check to make sure your pain control is adequate. If necessary pain-killing tablets or injections may be given.

When the nursing staff are happy that your observations are normal and that you are feeling well, you will be taken to a 'step-down' area. Here you can sit in a chair and have a drink and a light snack. When feeling able, you may get dressed. Before you leave, one of the nursing staff will give you, if necessary, some tablet painkillers.

Procedure follow-up appointment

A routine appointment will be made for you to come and see me approximately 4 weeks after your procedure. This appointment is to make sure that you are progressing well and to discuss further treatment. Nicola will phone you for an update and make the appointment, telling you when and where to come. If you have concerns or a particular commitment to cater for, then please contact Nicola directly.

At home

When you get home it is important to take things easy and get plenty of rest. If you have received medication into a drip, you must not drive or operate machinery for 24 hours. During the coccygeal denervation, the needle is placed into the area where the pain comes from. It is not unusual for the pain to 'flare-up' for a few days before it settles and the benefits come through. During this time, simple pain-killing tablets are helpful. It is also wise to keep on the move. Do not take to your bed, or spend long periods in any one position. Do some gentle stretches as recommended by your physical therapist and go for short walks.

Additional Information

- Diabetic people may notice their blood sugar levels are higher than normal in the week following the injections.
- Some people will experience their pain getting worse before it gets better.
- If severe pain develops, or you notice a high temperature or redness or swelling at the injection point, or any significant weakness, you should seek medical advice immediately.

Long term outlook

Coccygeal denervation is one part of the solution to your pain. It will reduce pain levels down over a period of weeks. You should not expect the pain to disappear 'overnight'. Once the initial discomfort of the procedure has settled down, the pain should become significantly reduced. During this time it is up to you to make the most of it. After one week you should perform the stretches and exercises shown to you by your physiotherapist. Gently increase your activity without overdoing it. You should not be

doing any fixed position, heavy or excessive exercise in a gymnasium or lifting heavy bags.

However, there is a chance that the pain will not improve, will change or will get worse. Those patients who get little or no benefit will have to consider other treatments. In a small group of patients this will involve a surgical operation, but this is to be avoided if at all possible.

It is always wise to find out as much as possible about your procedure. It may be worth discussing the treatment with your general practitioner, getting a second opinion from another specialist, or searching the Internet. By the time you undergo the procedure you should feel fully informed about what is proposed for you and why.

What do I do if I am unwell after the procedure?

- If it is between 09.00-17.00 Monday to Friday call Nicola on 020 3475 7799.
- Out of hours call The London Clinic on 020 3475 7799 and ask for Matron's Office, who will contact me.
- In an emergency – Call an ambulance.