Radiofrequency neurotomy for facet joint pain

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What is radiofrequency denervation?

Radiofrequency denervation or lesioning is a procedure performed on the nerve supply to the joints of the spine. It uses high frequency electricity applied through a special needle. The heat produced by the electrical current at the tip of the needle will disrupt the function of the nerves responsible for some of the pain that you have. The procedure is done in an attempt to provide long term relief. After a period of time however, the nerve will regenerate and the pain may return.

Why do radiofrequency lesioning?

Usually it is because you had significant short term relief from an earlier local anaesthetic block to the facet joints or their nerve supply which suggests a potential for long term improvement with this treatment. However, this procedure is not the universal solution for every patient and despite it being technically a very good treatment, some patients fail to obtain a long term response.

Where is the lesion made?

The facet joints are pairs of small joints situated at each vertebral level of the spine. Each facet joint is supplied by two nerves that transmit many types of messages such as feeling, movement and pain away from the spine to the brain. By blocking these messages we hope to relieve some of the pain that you are experiencing. Before this procedure is undertaken, the joints and branch nerves will have already been proved to be painful by a previous procedure, such as a medical branch block.
How effective is radio frequency lesioning?

Success rates vary but typically about 50% of patients undergoing this procedure will experience significant pain relief for six months to two years. After a period of time, however, the nerve will regenerate and the pain may return. Of the remaining patients, about 50% will get some pain relief for a shorter period. Pain relief may take up to 2-3 weeks to achieve its maximum effect. It is very unlikely that you will get complete pain relief as not all pain is generated in the facet joints. There is a possibility that in a small number of patients the procedure may have no effect at all and there is a 5% risk it can make the pain worse permanently.

How is the procedure performed?

The procedure is done under X-ray control. If you are a woman of fertile age you need to inform us if you may be pregnant. Occasionally we may need to ask you to have a pregnancy test.

The procedure involves the following steps:

• You will be asked to lie on your stomach with pillows supporting your head, chest and hips
• Your doctor will slightly numb the area with an injection of local anaesthetic before commencing the procedure
• The radiofrequency needle will be inserted and directed towards the targeted nerve under X-ray control. It is important that you keep still and relax your back muscles as tensing your muscles can make placing the needle accurately more difficult
• Once the needle is in the correct position an electrical current will be passed through it which may cause a tingling sensation or a twitch
• Your doctor will then ask you what sensations you feel and where you feel them
• It is important that you tell us the first moment when you notice an abnormal sensation and if this matches the area
where you normally get your pain. Sometimes the pain that troubles you can be reproduced during the procedure

- It is also important to make certain the needle is not in the vicinity of any major nerve roots and you will be asked if you feel any twitching in the legs
- Once all tests have been carried out, more local anaesthetic will be injected so you do not feel pain whilst the lesion is being made

The procedure usually takes 30-40 minutes. The lesion will not be done if we are unhappy about the tests.

**Can I have sedation?**

Local anaesthetic is used for this procedure so you should only experience minimal discomfort. However, as your cooperation is important for a successful procedure, no sedation is used.

**Can I eat before coming in?**

You can eat and drink normally before arriving in the department. If you are diabetic, please bring along your insulin, normal snacks and glucose tablets (if appropriate).

**What are the complications?**

Complications are rare with this procedure but do occasionally occur and include:

- Infection
- Bleeding
- Pain around the injection site
- Numbness in the back
- Numbness and rarely weakness in the legs, usually temporary
• There may be a temporary worsening of pain
• Allergic reactions to the local anaesthetic used
• Groin discomfort

Medication
• Please take all your prescribed medication as normal prior to your procedure unless you have been otherwise advised
• Please bring a list of all your current medication when you attend for your procedure

Important information
Please inform the department on 0121 371 5100 if you are taking or have been newly prescribed anticoagulants (blood thinning medication), if you have a cold or persistent cough, are taking a course of antibiotics or there has been any significant change in your overall health as this may affect your procedure. Failure to do so may result in your procedure being cancelled on the day.

Pre-procedural education
You may be required to attend an education session before undergoing your procedure. During this session you will be advised on what to expect on the day and the potential risks and benefits of the procedure. You will also be given an overview of pain management including pacing, flare-up management and goal setting. At this session you will also have the opportunity to ask questions.

As you are aware, these procedures are not a cure for your pain. They are performed in order to reduce pain, maintain or improve function and in some cases provides a window of opportunity for people to start physiotherapy.

If you are booked onto an education session and you fail to
attend, you will not be offered the procedure as previously planned.

What will happen after the injection?
You will be asked to remain in the clinical area for about half an hour after the injection, during which time the nurse will check your blood pressure and pulse along with the injection site.

Why can I not drive myself home?
You would not be covered by your insurance to drive a vehicle for a period of 24 hours following this procedure. This is because you may have a temporary weakness affecting the area injected which may impair your function or ability to drive safely. Therefore, for your own well-being, we advise that you are collected by a relative or friend.

Hospital transport can only be booked if there is a medical need and you meet the criteria.

When can I go home?
When advised by the nursing staff, you will be able to make arrangements to go home.

What happens afterwards?
On the day after the procedure, you may gently return to regular activities. Your back will usually be very sore for a few days and up to two weeks after the procedure. This pain is usually caused by muscle spasms and irritability while the targeted nerves are dying from the heat lesion over the next seven to fourteen days. During this time painkillers can be used to treat the soreness. Ice or heat can also be applied to alleviate discomfort.
The nerves will grow back (regenerate) but this does not mean that the pain will come back. If your pain does return a second procedure may be performed.

**Back at home**

You can remove the dressing from the injection site after 24 hours. If you have any queries in relation to your care please contact the pain service nurses on: 0121 371 5105 (voicemail), or nurse-led appointment enquiries on: 0121 371 5110.

For general enquiries or appointments, please contact the secretaries on: 0121 371 5100.

Please use the space below to write down any questions you may have and bring this with you to your next appointment.
The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.