

Pain and symptom control team

## Cordotomy

Your doctor has suggested that you may benefit from this procedure. It is a specialised type of nerve block. Pain is transmitted by nerves so it is often possible to reduce pain by blocking signals from affected nerves. It is normally performed to relieve pain from cancer when this pain is localised to one side of the body below the clavicle (collar bone). It involves interrupting pain signals travelling in the spinal cord high up in the neck on their way to the brain to reduce or abolish the perception of pain. This leaflet is designed to help you make an informed choice about whether or not you would like to have it carried out.

### How is it performed?

The procedure usually takes between 30 minutes and one hour and 30 minutes.

You will be admitted in the morning of the procedure (Thursday). The doctor will see you and mark your neck with an arrow on the side where the cordotomy is to be performed. This is the side OPPOSITE to where the pain is.

We will take you to theatre and put an intravenous drip in your hand. We will carefully position you lying flat on your back with your head on a specially-designed head-rest. Initial X-rays will be taken with an X-ray machine on either side of your head. Your upper-neck area close to your ear will be sprayed with a cold antiseptic and local anaesthetic will be injected into your skin here.

The doctor will carefully pass a further needle, under X-ray guidance, into the fluid-filled space around your spine. More X-rays will be taken to check needle position. Once the doctor is satisfied the needle is in the right place, he will pass a very fine, specially-designed needle through this needle into your spine itself.

The sensory nerves in your spine will be stimulated to test where the needle is in relation to the pain nerves, and the doctor will ask you what you feel and where you feel it during this test. Further X-rays and needle repositioning are often needed at this point, and the test may need to be repeated several times.

Once the doctor is satisfied that the needle is in the right place, its tip will be heated for about a minute to disrupt the pain nerve fibres. The effect of this on your perception of pain (via pinprick down one side of your body) will be assessed and it is usually necessary to heat the needle for a further minute or so to consolidate the block.

After this, the needle is removed and a small dressing applied.

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You will spend some time in the recovery area before being taken to a ward for overnight observation. If successful, your pain-relieving medication will be halved. You will be discharged the following day. The following Tuesday morning a specialist pain nurse will telephone you and advise you and your GP to halve these medicines again provided your pain remains under control.

### **Does it hurt?**

Every effort will be made to ensure your comfort during the procedure. Some patients find lying flat in one place difficult due to their existing pain. If this applies to you, you can receive strong painkillers into your drip to help.

Local anaesthetic injected into the skin can feel momentarily like a sharp sting but this should be short-lived. Further needles in the area where local anaesthetic is injected should not be too uncomfortable.

Many people worry about pain when the needle is inserted into the spine itself. This is very rarely painful as the spinal cord itself is not capable of feeling pain. Sometimes, very short-lived, odd sensations are felt in various places in the body as the needle is inserted but these are usually well-tolerated.

In 1 in 10 patients, severe pain, usually behind the ear, is felt when the needle is heated. We will routinely give you a dose of strong painkiller into your drip in case you feel this, but it can be quite unpleasant. If you are not able to cope with it, the procedure will be stopped. Usually, after a minute, the procedure can be restarted and the pain is less severe the second and subsequent times. However, the procedure will be abandoned if you so wish.

### **Does it work?**

Complete pain relief is achieved approximately in 7 out of 10 cases. For 1 in 10 to 2 in 10 people, success is partial (for example, pain will remain but will be less severe than before the procedure, or the block will only partially cover the whole pain area).

Sometimes, despite best efforts, the needle cannot be sited correctly in the spinal cord. If, after about 1 hour and 30 minutes of trying, or before this if you feel unable to continue, the needle may be removed and the procedure stopped. If this is the case, we will ask you if you wish to try again at a later date.

### **Are there any complications or side-effects?**

- The most significant complication is failure of the procedure to work. Sometimes this is because the needle cannot be sited correctly in the spinal cord or it has to be stopped for other reasons. In 1 in 10 patients in whom the procedure is successfully completed, good pain relief is achieved but unfortunately lasts only for a limited time, such as a few days.
- Where successful, you will not be able to feel pain down one side of your body but you will also not be able to feel hot or cold either. This is because the same nerve pathways that convey pain sensation to the brain also convey temperature.
- Most patients are left with a slightly odd feeling down one side of their body. Patients often find it very difficult to describe. About 1 in 20 patients find it unpleasant, but few think it worse than the pain. Once it is there, it is permanent, and there is little that can be done about it.
- Some patients complain of a weak leg on the same side as the cordotomy. In the vast majority, this lasts less than 24 hours. In 1 in 20 patients, it lasts for up to a month, and very rarely it is permanent.
- There have also been reports of problems passing urine or urinary incontinence, but this also is very rare.

- Cordotomy can theoretically make respiratory function and breathing more difficult, although this is controversial - we don't really know whether it is true or not.
- Sometimes after a successful cordotomy, patients experience pain of a similar character and location as the original pain, although usually of much lower intensity, on the opposite side of the body. We do not understand why this happens. It is almost always self-limiting, and tends to resolve within 48 hours.
- You may be left with slightly drooping eyelid and small pupil on the side of the cordotomy.
- You may experience a temporary headache after the procedure.
- Bruising, local infection, bleeding and allergy to local anaesthetic or x-ray contrast media is possible.
- Very rarely, there have been worldwide case reports of death during cordotomy. This is usually due to irreversible causes. It occurs when there is a painless loss of consciousness before your heart stops beating and you stop breathing. Your doctor will ask you your wishes should this happen to you. Almost all patients having a cordotomy, when fully informed, choose not to receive CPR (cardio-pulmonary resuscitation) in the event of this happening, but your wishes will be respected.

### **Where can I get more information?**

If you have further questions that have not been answered by this leaflet, or if you wish to discuss anything further, please contact Andrea Rolland, secretary to Dr Scott-Warren on **0161 446 8493**. She will arrange for you to speak to Dr Scott-Warren or one of the specialist pain nurses.

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

We try to ensure that all our information given to patients is accurate, balanced and based on the most up-to-date scientific evidence. If you would like to have details about the sources used please contact [patient.information@christie.nhs.uk](mailto:patient.information@christie.nhs.uk)

For information and advice visit the cancer information centres at Withington, Oldham or Salford. Opening times can vary, please check before making a special journey.

Contact The Christie Hotline for  
urgent support and specialist advice  
**The Christie Hotline: 0161 446 3658**  
Open 24 hours a day, 7 days a week

