Introduction

Percutaneous cordotomy is a specialist procedure for relief of pain below the level of the neck due to cancer and particularly for the relief of chest pain in one side of the chest (known as unilateral) due to malignant mesothelioma.

The procedure is only performed in a few specialist centres in the UK. This information leaflet is aimed at explaining what the procedure entails and the benefits and side effects.

Who is it for?

Percutaneous cordotomy can provide excellent pain relief in patients with mesothelioma who have unilateral chest pain.

Proposed benefit

The intention is to reduce pain in the affected area so that lower doses of painkillers are needed. The procedure is successful in approximately eight out of ten patients.

Potential side effects or risks

Serious side effects are extremely rare, affecting less than 1% of patients. Temporary weakness, usually in the legs and rarely in the arms, may occur. One in five patients may experience some weakness. This usually improves within 48 hours, but occasionally can take up to a month to settle and, very rarely, becomes permanent.

There will be some change in sensation on the side of the body where the pain is experienced. For most patients this change is not a problem but one in twenty may find the sensation distressing.
Some patients may experience a headache for the first 48 hours following the procedure.

If the pain pathway cannot be located, the procedure will be abandoned. This happens in approximately one in twenty of all cases.

In one in twenty patients, the procedure is completed but there is a possibility that the desired pain relief is not achieved.

**Preparation for the procedure**

It is important that medications are continued up to the time of the procedure so that you remain as comfortable as possible.

You will not need to fast but may be restricted from eating solid foods for a short period prior to the procedure.

After a full explanation, and the opportunity for you to ask questions you will be asked to sign a consent form, to state you understand and agree to the procedure.

What does the procedure involve?

Percutaneous cordotomy is performed using local anaesthetic and the patient is given sedation prior to the procedure.

The nerves carrying pain from one side of the body cross to the other side once they enter the spinal cord and travel to the brain in a bundle called the lateral spinothalamic tract. If this bundle of nerves is divided in the neck, pain from the opposite side of the body can be blocked.

You will need to lie on your back under an x-ray camera.

A needle will be inserted into a vein in your hand or forearm and a saline drip set up.

Painkillers can be given if needed to make you more comfortable. Using local anaesthetic, a needle will be inserted into your neck on the opposite side to the pain you experience. X-rays are used to guide the needle. Gentle electrical stimulation is then used and, by asking you to tell us what you feel, we can check the position of the needle. When positioned correctly, the needle tip is then heated to destroy the nerves carrying pain.

**After the procedure**

- Your blood pressure will be measured for 4 hours. If you feel well enough, you may sit up and drink immediately. Some patients may need a little longer.
- A minimum overnight stay in hospital is necessary to monitor your condition.
- Your specialist will supervise the reduction of your morphine or other strong painkillers and inform your GP if necessary.
- The intravenous drip will continue overnight and be removed before you go home the following day.
- You should remain on bed rest overnight, and have some help getting out of bed the next morning.
- Morphine-type painkillers are usually decreased by 30-50%, then re-adjusted as required.

**Alternative treatments for pain**

It is important that you discuss all treatments with your specialist to find out what may be the best option for you. Below are some options that may be considered:

- Your painkillers can be adjusted to increasingly higher doses to manage the pain.
- Painkillers can be delivered by a pump as a continuous infusion either subcutaneously (under the skin) or into the spine through an epidural or spinal catheter.
• A procedure called intrathecal neurolysis may be used when a percutaneous cordotomy is not possible. In this procedure, phenol or alcohol is injected into the spinal canal to numb the pain nerves as they enter the spinal cord.

Reference

The following centres offer a percutaneous cordotomy service to patients.

Dr Mike Williams or Dr Nick Campkin, Pain Clinic, Level D, Queen Alexandra Hospital, Cosham, Portsmouth PO6 3LY.
Tel: 02392 286232
Fax: 02392 286944

Dr Manohar Sharma, Consultant in Pain Management, The Walton Centre for Neurology and Neurosurgery NHS Trust, Lower Lane, Liverpool, L9 7LJ.
Tel: 0151 5298294 (Pain Clinic) or 0151 5292098 (Aintree Palliative Care Service)

Dr Margaret Owen, Consultant in Anaesthesia and Chronic Pain, Beatson West of Scotland Cancer Centre, 1053 Great Western Road, Glasgow G12 0YN
Tel: 0141 301 7042

Each centre has its own patient information leaflets that may have specific local information relevant to their percutaneous cordotomy service. All of these centres would be happy to answer any questions that you may have on the information provided.