Intrathecal Catheters for pain management

Delivering the best in care

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What is an intrathecal catheter?
An intrathecal catheter is a thin plastic tube that is inserted into the spinal fluid, which bathes the nerves of the spinal cord. The tube is placed between the bones of the spine at a chosen level to reach the spinal fluid and nerves. The other end is buried under the skin and comes out (usually on the abdomen) to allow drugs to be given through the catheter.

Painkillers are given slowly and continually from a small pump attached to the catheter. Most of the drugs used are very similar to those taken by mouth or injection but are used in a much smaller dose. Special filters on the outside end of the catheter and pump guard against infection.

What are the alternatives to an intrathecal catheter?
There is not really a suitable alternative to having an intrathecal catheter inserted. If this procedure has been recommended for you, it is likely that all other options to manage your pain will already have been tried. However, if you have any concerns about your treatment, your consultant will be happy to discuss them with you.
Positioning of the catheter

- Catheter in Epidural Space

- Tunneling device in subcutaneous tunnel
Why you may need an implanted catheter

Your doctor will have already considered that you may be a suitable patient for an intrathecal catheter and will have discussed this with you. The usual reason is because your pain relief is not effective or because the side-effects of the painkillers being taken are unacceptable and this affects the quality of your life.

What are the expected benefits?

These are:

- better pain control
- reduction in medication use
- less unwanted side effects because the doses of drugs used are much lower
- improved ability to undertake everyday activities

What will happen?

First there will be a pre-insertion assessment to ensure that this is the most appropriate method of pain relief for you and that you are happy to proceed with the treatment.

The next stage is the actual procedure. The following days will be spent making sure that the drugs used are the most effective and that the doses given are right.

The final stage involves arranging for caring of the catheter. During this time you, and perhaps your family or carers, may become involved in looking after the catheter and pump. Other health care professionals, for example, district nurses or the Community Palliative Care Team will provide help, support and advice.
Pre-insertion assessment

It is very important at this stage that you discuss everything about the intrathecal catheter with your doctors, nurses, carers and family. You and your family must have read and understood the consent form and the sort of care that you will need following insertion.

During this stage you will learn about the pump equipment and filters and discuss exactly where the catheter will be placed. You and anyone involved must be satisfied and well informed regarding the catheter and pump. If you have any questions or queries, it is essential that you ask them so that you are clear about what is involved.

Implanting the catheter

This is a technical procedure that is carried out by one of the pain management consultants and is done in hospital. You must not eat anything for at least 6 hours before the procedure. You will be given antibiotics to guard against infection and you will be carefully monitored during the procedure and for several hours afterwards. Usually the procedure is quite straightforward and is done with local anaesthetic to numb the skin and muscles where the catheter is to be placed. Patients normally lie on their side or front while this is being done and each step is explained as it happens. The procedure would usually take between 30 and 45 minutes.

Following the procedure it is likely that you will be required to stay in hospital for approximately 24 – 48 hours or until your condition is stable.
Following insertion of the catheter

Once the catheter is in place, painkilling drugs can be given via a pump directly into the spinal fluid. Your pulse, blood pressure, temperature, breathing and level of pain will be closely monitored for the next 24 hours or longer as the effects of the drugs are assessed.

Over the first few days we will establish which drug and dose will achieve the most effective pain relief with the least side effects. Not every patient will have the same drug or dosage. During this period you will be carefully observed for any complications and will learn how to look after the catheter and pump. You may still need to take some of your normal painkillers until we establish a good level of pain control.

Once your new drugs have been stabilised and you and those involved in your continued care are confident about managing your pump and catheter, plans for you to return home can be made.

What happens when you go home?

Once you are at home you may be involved in looking after your pump and catheter.

Your care team will be in regular contact to help you and also to refill your pump with medication. You will have exact details of what action to take if you begin to experience any problems and you will also be given telephone numbers to call in an emergency or if you need advice. It is also important that you are aware of potential complications that may occur and note any significant changes in your pain relief. Please be reassured we will cover all important details before you go home and will make sure you and your carers are happy and clear about everything.

A supply of alternative painkillers will be available to use and you will be given advice on how to use them in case there are
any problems with the pump or the painkillers used in the pump. Depending on the drugs you require and with good care of the catheter and pump you should be able to undertake all your usual activities. However, excessive physical activity can displace the catheter and should be avoided. You will be advised about physical activity.

Are there any risks and possible complications?
With appropriate care and attention this technique can be very effective and safe, although total pain relief cannot be guaranteed and side effects and complications do occur from time to time.

Minor complications
Immediately after insertion of the catheter, minor complications such as bleeding, headache, excessive drowsiness or technical problems with the pump or catheter may occur, but these are usually easily treated or corrected.

Major complications
Major complications including infection, meningitis and nerve damage are uncommon immediately after insertion of the catheter. Under 3% of patients suffer with serious complications.

Long term complications
Long term complications occur in about 7–9% of patients. These are some complications which may occur and you should look out for:

- **infection**: soreness and redness at the site of the catheter exit or over your back and unexplained high temperatures
- **spinal fluid (CSF) leaks**: clear fluid leaking around the catheter exit site or developing a swelling around the site
• **failure of pain control**: may be due to a displaced or blocked catheter or pump failure. Rescue pain relieving medication will be prescribed which is available for use.

Health care professionals, including, for example, your GP, district nurse and Community Palliative Care Team will be available for support and advice should any problems occur. Contact numbers will be provided for the appropriate members of the team.

**What are the side effects from the medications used in the catheter?**

The most common unwanted effects are constipation, feeling sick, itching and inability to pass urine. Less common side effects include altered hormone levels, weight gain, loss of libido and dysfunction of erection. Most side effects are short-lived and can be satisfactorily alleviated with other medicines when necessary.

If you have any concerns or questions related to the above or with regards to your ongoing care please contact:

- **GP**
- **District Nurse**
- **Community Palliative Care Team**
- **St Mary’s Hospice 0121 472 1191**

The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk or call 0121 627 7803