Intrathecal catheters and infusions for pain management

Patient information
What is an intrathecal catheter?

An intrathecal catheter is a thin plastic tube that is inserted into the spinal fluid. The catheter (a tube) is placed between the bones of the spine at a chosen level to reach the spinal fluid and nerves of the spinal cord. The other end of the catheter is placed under the skin to allow medicines to be given.

What is an intrathecal infusion?

Medicines for pain relief are given slowly and continuously from a small pump attached to the intrathecal catheter. This is called an infusion. Most of the medicines given by the infusion are very similar to those taken by mouth or injection but are given in a much smaller dose.

Why you may need an intrathecal infusion

Your doctor will have already considered that you may be a suitable patient for an intrathecal infusion and will have discussed this with you. The usual reasons for an intrathecal infusion are that your current pain medicine is not working or it is causing side effects that affect the quality of your life.

What are the alternatives to an intrathecal catheter and infusion?

If this procedure has been recommended for you, it is likely that all other options to manage your pain will have been tried already. If you have any concerns about your treatment, the healthcare team will be happy to discuss them with you.

What are the expected benefits of having an intrathecal infusion?

- better pain control
- less unwanted side effects (because the doses of medicines given are lower).
Positioning of the intrathecal catheter

Graphics courtesy of University Hospitals Birmingham, National Health Service, United Kingdom
How is an intrathecal catheter inserted?

This is a technical procedure carried out by a pain management specialist in hospital. The procedure is quite straightforward. A local anaesthetic is used to numb your skin and muscles where the catheter is to be placed. You normally lie on your side or front during the procedure and each step is explained as it happens. It usually takes 30–45 minutes. You will be carefully monitored during and after the procedure.

Following insertion of the intrathecal catheter

Once the catheter is in place, medicines will be given by infusion into the spinal fluid. Your pulse, blood pressure, temperature, breathing and level of pain is monitored for the next 24 hours or longer as the effects of the drugs are assessed. You will need to stay in hospital or hospice for around 5–7 days to adjust the medicine to your needs.

Managing your pain with an intrathecal infusion

Over the first few days, the healthcare team will establish which medicines and dose will give you the most effective pain relief with the least side effects. Not all patients have the same medicines or dose. A variety of medicines can be used, usually a local anaesthetic (numbing agent) plus a morphine-like drug. You will have a constant rate of infusion plus you will be able to give yourself top-up doses (called bolus doses). The pump records every dose that is delivered into your body.

You may need to take some of your normal pain relief medicine until a good level of pain control is reached. The healthcare team will work with you to adjust your medicines to get the best pain relief.

Are there any risks and possible complications?

With care and attention, an intrathecal infusion can be very effective and safe, although total pain relief cannot be guaranteed. Side effects and complications do occur from time-to-time.

Complications such as bleeding, headache, excessive drowsiness or technical problems with the pump or catheter may occur. These are usually easily treated or corrected.

There is a risk that the medications may cause numbness of the legs, which can make walking more difficult, and may decrease the sensations of your bowel and/or bladder.

There is also a small risk of more serious complications such as infection, meningitis and nerve damage.
Looking after your pump and catheter

Once you are at home you will look after your pump and catheter. The healthcare team will be in regular contact to help you.

It is important that you are aware of complications that may occur and note any changes in your pain relief. Details of how to care for yourself, maintain your catheter and pump, and take action if you experience any problems are described below.

Avoiding infection

You will need to be careful about hygiene and infection. Please let the healthcare team know straight away if you have any signs of infection, which can include:

- a temperature about 37°C, feeling generally hot, sweaty and unwell
- headache, backache or sensitivity to bright light
- pain or discomfort passing urine or passing small amounts very frequently
- pain that gets worse when you give yourself extra doses of medication
- cough and/or production of sputum
- redness, swelling or soreness anywhere on your skin.

Showering

You can still take a shower; however, all the areas covered with a dressing must be kept completely dry. The healthcare team will advise you of the best way to do this. Avoid having a bath as it will be harder to keep the dressing dry.

During your shower keep the pump running but do not get it wet. If it does become wet, dry it as much as possible and contact a member of the healthcare team.

Maintaining your catheter

There are certain things to check each day to ensure that the infusion works well and the skin around the exit site stays healthy:

- Thoroughly clean and dry your hands before touching any part of the tubing or dressing.
- Untwist the tubing (not the connections) regularly to make sure it is not ‘pinched’ or the connections have become loose.
- Check each connection and make sure they are firm but not too tight.
- Ensure the dressing is dry and clean. Use a mirror if you can’t see it yourself or ask someone to check it for you.
- Ensure that the corners of the dressing are not lifting up. If they are, use the tape provided to stick these down firmly. If the middle of the dressing has lifted off (even a little bit), call one of the healthcare team members.
- Feel the area around the catheter to make sure it is not hot to touch, swollen, red or sore.
Maintaining your pump

- Don’t get the pump wet. If it does become wet, dry it as much as possible and contact a member of the healthcare team.
- If the pump is dropped – check the battery, connections and the screen. The screen should show that the pump is running. If the pump is not working, contact a member of the healthcare team.
- The healthcare team will show you and your family how to change the batteries in the pump. Please make sure that you always have spare batteries available.
- Your pump will have a key. Ensure that the key stays with the pump at all times. Consider attaching the key to the pump bag.

Example of a pump used for infusion

Other considerations

If you experience numbness you will need to take care to avoid injury, especially when near heaters, exposed to hot or cold objects, using hot water or handling sharp items.

Try to keep a regular routine for emptying your bowel or bladder. Let the healthcare team know if you are having any difficulty with this.

Supply of medicines

Your doctor will arrange a prescription for the medicines you need. Your family/carers may be asked to collect these. You will need to see your doctor regularly to monitor the effect of the medicines. If you are at home and you are unable to see the hospital or hospice doctor, a member of the healthcare team will visit you at home.
Contacting your healthcare team

Support and advice is available to you. Contact numbers will be provided to you for the members of your healthcare team.

Write these contact numbers below as a handy reference:

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Acknowledgement

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References

1. All About Intrathecal Catheters and Pain Relief; 2009. Clinical Issues Working Group, Palliative Care WA Inc, Perth, Western Australia.
