



**Royal Berkshire**  
NHS Foundation Trust

# **Intrathecal chemotherapy**

Information for patients

## **What is intrathecal chemotherapy?**

Intrathecal chemotherapy is the injection of chemotherapy into the fluid surrounding the brain and spinal cord. This fluid, called cerebrospinal fluid (CSF), protects and cushions the brain and spinal cord.

## **Why do I need Intrathecal chemotherapy?**

With some types of blood cancers, cancer cells can pass into the CSF. Most chemotherapy drugs given by mouth or intravenous injection cannot cross over easily into CSF. Intrathecal chemotherapy is used to prevent cancer cells spreading to the CSF, or it is used to treat cancer that has already spread there.

## **How is Intrathecal chemotherapy given?**

Intrathecal chemotherapy is given via lumbar puncture, through a small needle in the lower back. The procedures are performed on Battle Day Unit or on Adelaide Ward and always in a side room. Giving treatment by lumbar puncture will take about 15-30 minutes and it is important that you are able to stay still. Please let the doctor or nurse know if you are uncomfortable or are in pain. The procedure can be done either in a sitting position or lying on your side. In either case your back will be curled up to open the spaces for placing the needle.

The doctor will clean the skin on your lower back to make it sterile, and then give you local anaesthetic via an injection. When the local anaesthetic has numbed the area, the doctor will insert a needle into your spinal fluid. The doctor will remove a small amount of CSF and then slowly inject the chemotherapy drug. The needle will then be removed and a small dressing used to cover the injection site.

## **What will happen before the procedure?**

You will have a blood test, one to two days before the procedure to check your platelets (purple tube) and blood clotting (blue tube). If you are taking blood thinning medications such as tinzaparin,

warfarin, apixaban, rivaroxaban or dabigatran, the Haematology doctors and nurses will give you instructions regarding these. On the day of the procedure, the doctor and nurse will explain the procedure and will confirm your identity and check the prescription and the chemotherapy. They will ask you to sign the prescription chart if you are happy to go ahead with the procedure. The chemotherapy is checked again immediately before it is given.

## **Are there any side effects or risks?**

The chemotherapy drug injected will have its own specific side effects that you will be given written information about and which are written on the chemotherapy consent form. There are many checks and procedures in place to ensure the correct drug is given because giving the wrong drug may be fatal. For example, the needles are designed so it is not possible to connect the wrong drug to them. Lumbar puncture is a relatively safe and commonly performed medical procedure and many patients do not have problems. Like any medical procedure it does have some risks and possible side effects. Your consultant will only recommend lumbar punctures if the potential benefits outweigh the risks.

- One of the most common problems is that it may be difficult to place the needle in the correct position, particularly if you have had several lumbar punctures before. Please let the doctor know if you have had previous back surgery or back problems.
- The most common side effect is a headache within the first 24 hours (3 out of 10 patients get this). This type of headache is worse when sitting or standing and can be associated with nausea and vomiting. If you develop a headache it may help to lie flat, take some painkillers (e.g. paracetamol) and drink plenty of fluids. **Please do not take non-steroidal drugs such as ibuprofen or naproxen without having spoken to one of the Haematology doctors or nurses as they may increase the risk of bleeding.** The headache usually goes away on its own after a couple of days. If the headache continues for longer, you should contact us for advice.

- You may also have back pain where the needle was inserted and/or shooting pains in your legs but these should settle within 48 hours.
- Bleeding or infection are very rare problems after lumbar puncture but can be serious if they affect the brain or spinal cord. Therefore, there are checks before the procedure to minimise the bleeding risk and it is performed in sterile conditions.
- Nerve damage is also very rare but occurs in around 1 in 10,000 patients. This may result in weakness or numbness in the legs or potentially problems with the function of the bladder or bowels.

## **What happens after the lumbar puncture?**

You will need to rest after treatment and lie flat on your back for one hour to reduce the risk of headache.

Please keep the dressing dry. Avoid swimming and bathing for at least 24 hours. You can shower but please, keep the dressing dry. If the dressing gets wet, remove it and replace it with a normal plaster. Please contact us if you have a persistent headache or pain in the back or legs that does not go in 48 hours after intrathecal chemotherapy.

## **Contacting us**

For queries before or after your lumbar puncture, please call your Haematology Specialist Nurse (Mon-Fri 9am-5pm), or Adelaide Ward on 0118 322 7470. If you have queries about clinic appointments, please phone the Haematology Clinical Admin Team (CAT 8): 0118 322 8145 option 2 or email [rbb-tr.cat8haematology@nhs.net](mailto:rbb-tr.cat8haematology@nhs.net) (9am-5pm), Monday to Friday.

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