Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Lumbar Puncture

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Lumbar Puncture

Patient Information

Medicine

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What is a Lumbar Puncture (LP)?

An LP is a safe and commonly performed investigation which will provide your doctor with information to help diagnose and treat your condition. The aim of a lumbar puncture is to obtain a small amount of cerebrospinal fluid (CSF) which is the fluid that bathes and protects the brain and spinal cord. It is produced constantly, so that the small amount removed during an LP is rapidly replaced.

What are the benefits of having an LP?

The CSF is processed in a laboratory. It can take several days to analyse, but will give your doctors important information about a range of conditions which may affect the brain and spinal cord. Common reasons for the procedure include:

- Infection and inflammation
- Bleeding
- Raised pressure within the brain

If you are not sure why you are having the procedure done, please ask your doctor.

Therapeutic LP

An uncommon reason to carry out this procedure is to treat your medical problem rather than simply investigating it. This may be due to a raised pressure within the brain and your doctor will explain further about why it is being done and what the potential benefits of the procedure are.

Alternatives

There is no alternative practical method of obtaining a sample of CSF. The information this provides will help the doctor make sure the right diagnosis is achieved and best treatment commenced.

What happens next?

A doctor will explain how the LP is performed and you will be given the opportunity to ask questions. You will be asked to give verbal or written consent before the LP is performed.

How is the test performed?

You will be asked to lie on your side at the edge of the bed, with your knees curled up to your stomach, trying to keep your back straight. You will need to keep as still as possible during the procedure; hence it is important to be as comfortable as possible within this position. Occasionally the procedure may be performed in a sitting position.

The doctor will clean the lower part of your back with antiseptic, which may feel wet and cold. A local anaesthetic is then injected under the skin with a very fine needle; this may sting for a few seconds and then the area will go numb.

The lumbar puncture needle is then inserted into the appropriate area. Once the needle is in the right position to collect the CSF, the doctor will measure the pressure, collect a number of samples and then withdraw the needle.

A blood sample will usually be taken and sent to the lab with the CSF sample to help interpret the results.

The entire procedure may take about 20 minutes but could take longer. You will be advised to lie flat for a short period thereafter.

It is important to be aware that if the first attempt is unsuccessful; then further attempts may be required. Occasionally this may need to be done by a different doctor on a different day.

Will it be painful?

Commonly, patients are surprised to find they experience little or no discomfort and the thought of the procedure is the worst thing about it. You may feel a sting when the local anaesthetic is injected. You may feel a sensation of pushing and pressure as the lumbar puncture needle is inserted and sometimes a brief, sharp pain when the needle is moved forward. It is normal to experience such a pain, often down one leg and this does not indicate that anything is wrong. If you do experience pain, it is important to inform the doctor carrying out the procedure, so that they can help you to become more comfortable.

What are the side effects and risks?

Commonly occurring risks (risk greater than 1 in 10)

Headache

- Up to 1 in 3 patients experience a headache following an LP. This typically starts one to two days after the procedure. Symptoms are always worse when standing up and significantly eased by lying down.

- If you experience a post LP headache, you should lie down as much as possible and rest. You need to keep drinking plenty of fluids and take simple pain relief such as paracetamol.

- You would not normally need to seek medical advice, as this most commonly settles within a couple of days. However if the headache persists or worsens over time, it is recommended that you seek advice from the doctors or staff on the ward where the LP was performed, as you may require further treatment for your headache.

Backache

- Backache can occur. It is almost always mild and settles over a few days. Simple painkillers such as paracetamol may be helpful but should be limited to just a few days. It is exceptionally rare that a lumbar puncture causes damage to the nerves in the back. If you develop numbness or tingling in the legs you should contact your GP or Accident & Emergency.

Occasional risks (between 1 in 10 and 1 in 50)

Failure of the procedure

- At times a LP can be a technically difficult procedure. When initial attempts are unsuccessful, your doctor may ask another member of the team to attempt the LP.

- Alternatively it may be necessary to ask the anaesthetic team to perform the LP. In this circumstance, there may be a delay in performing the procedure, as a designated slot in theatre is required for any procedure performed by an anaesthetist. Rarely there may be a delay in obtaining this slot (hours / days) depending upon theatre emergencies. You may be admitted to hospital for the procedure or you may be advised to re-attend hospital on a different day to await a theatre slot. We will endeavour to keep you updated at this time, but please ask a member of staff if you have any further concerns.

- We appreciate your patience and understanding and apologise for any delay you may experience.

Extremely rare risks (less than 1 in 100000)

Infection

- Following an LP, patients may develop an infection that can be serious. If you develop a temperature, neck stiffness, vomiting or confusion after an LP, you should attend hospital as an emergency. The doctor will take special precautions to help minimise this risk.

Bleeding

- Bleeding can occur around the LP site. This may cause a bruise or in severe cases, the bleeding can extend and push on your spinal cord. This risk is increased if you are on anticoagulants such as heparin or warfarin, or if you have a bleeding disorder.

Damage to local structures such as nerves and muscle

- If you notice any unusual tingling, numbness or weakness following the LP, then it is important to seek urgent medical attention.

- Infection, bleeding and damage to local structures are extremely rare complications, but it is our duty to provide you with all this information prior to performing the procedure.

Contact

If you have any concerns about the information contained in this leaflet, please speak to the ward nurses or one of the doctors, or telephone the switchboard 01942 244000 and ask for the manager of the ward you stayed on.



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