Patient Information

Royal Devon University Healthcare
NHS Foundation Trust

Lumbar Puncture in Neonates

What is a lumbar puncture?

A lumbar puncture (LP) is when a small needle is inserted into the lower back in order to sample fluid that sits around the spinal cord and brain. This fluid is called cerebrospinal fluid (CSF).

Why is it needed?

We sample CSF for a number of reasons, but the most common reason is to make sure your child doesn't have an infection involving the brain. This would be suspected when the infection marker in the blood (CRP) is raised, or if your child is unwell. Getting the sample in this case can help guide us to best treat your child.

Another reason is to check for and release some of the pressure around the brain. We will discuss with you what the reason for the lumbar puncture is.

What are the risks involved?

The main risks of an LP are that we are sometimes unable to get the sample required. The sample is taken at a level below where the spinal cord ends so the risk of nerve damage is removed. The risk of bleeding and infection are very low due to the clean and careful way the LP is carried out.

What to expect?

The LP will be done in a space with good light, generally away from the bed space you are in. Parents are welcome to come with their child whilst they have the lumbar puncture but this isn't a requirement and some parents can find this distressing.

There are 2 ways of doing a lumbar puncture. This can be done with a child curled up on their side or sat forward.

Following the procedure, a small dressing will be applied to the area. You can leave this in place until it comes away by itself.

Does it hurt?

The insertion of the needle can be painful in the same way as a blood test can be. In order to reduce this discomfort, we use numbing cream over the skin where the needle will be introduced. Babies often don't like to be held in a curled position and this can make them upset. We can also make the process more comfortable by using sucrose (sugar water) and a pacifier.

When will I get results?

Some of the fluid is sent to check the amount cells, protein and glucose present. These results will be available in approximately 2 hours and will give us an idea of whether there is an infection present. The rest of fluid stays in the laboratory where they will check if any bacteria grow. This result takes approximately 48 hours to be available.

References:

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- **Govender, Indiran & Steyn, Carien & Maricowitz, G & Clark, C & Tjale, M. (2018). A primary care physician's approach to a child with meningitis. Southern African Journal of Infectious Diseases. 33. 31-37. 10.4102/sajid.v33i2.2.** [Online] Available at: https://www.researchgate.net/figure/Lumbar-puncture-positions-for-a-child_fig1_335694580 [Accessed 16/10/21]

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