What is an image guided nerve root block?

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What is an image guided nerve root block?

A nerve root block is an injection, most often a combination of local anaesthetic (a numbing medicine) and steroid (an anti-inflammatory medicine), around the nerves that come from your spine.

Inflammation around, or compression of these nerve roots may produce pain in your arms and legs. This is known as a ‘trapped’ nerved. The cause of the trapped nerve can be due to a narrowed exit hole (foraminal stenosis), slipped disc (far lateral disc), or by a slipped back bone (spondylolisthesis).

A nerve root block may help this pain but it is not a cure. It serves two purposes:

One is diagnostic; isolate which particular nerve is contributing to your pain.

The second purpose is to reduce your pain and the nerve swelling caused by your disc prolapse. Many prolapsed discs heal and shrink. Thus surgery could potentially be avoided.

Traditionally nerve blocks were performed using an X-ray machine but at this hospital, all of the nerve block injections are carried out using the CT scanner for guidance.

What are the risks?

Unfortunately, it is impossible to predict how much relief you will get from the procedure and therefore you may find that the procedure does not provide you with the level of pain relief you expect.

Occasionally, you may develop a headache. Over-the-counter painkillers should ease the pain however, if your headache persists beyond 24 hours, please seek medical advice.
Other risks are rarer and may include:

- Infection
- Bleeding
- Temporary worsening of the pain
- Nerve damage (see details below)
- Lowering in blood pressure (with light-headedness and nausea)

There is a 1 in 5,000 risk of bruising to the nerve root. There is also a very small risk of some permanent nerve damage (about 1 in 100,000). This would result in weakness, pain and numbness in the area being treated.

Occasionally patients may notice some facial flushing, nausea, or mild abdominal cramps for a few days following the injection. There can also be a temporary disturbance to the menstrual cycle. Diabetics may find that the steroid alters their blood sugar control for a few days, so should monitor this closely.

For the cervical nerve root blocks there is a very small risk of stroke and spinal cord damage. Your arm may feel weak after the procedure. If there are any serious complications such as a stroke or TIA (trans ischemic attack commonly known as a mini stroke) you will need to be reviewed at your closest Accident & Emergency Department.

**Risks associated with X-rays**

The risks associated with X-rays are very small. We are all exposed to natural background radiation every day of our lives. This comes from the sun, the food we eat and the ground. Each X-ray examination gives a dose of radiation on top of this natural background radiation. The benefits of this examination outweigh any potential risk and the risk from not having the examination could be greater. We will take all safeguards to minimise the number of X-rays you receive.
The risks of radiation are slightly higher for the unborn child so we must ask female patients aged 10 to 55 years about their menstrual history to understand if pregnancy is likely. If you think you could be pregnant, please tell a member of staff.

**How long will the pain relief last?**

It is not possible to answer this question on an individual basis as everyone responds differently to the treatment. For some patients the injection may eliminate pain completely or at least reduce the pain for several weeks. Some patients find that after the nerve block the pain does return but the pain is not as bad as it was before. However, some patients find that the injection reduces the pain for several weeks until eventually the pain does return and they experience the level of pain they did previously.

**Who will be performing the procedure?**

The examination will be performed by a neuroradiologist. During the examination there will also be a radiographer and sometimes a nurse or nursing assistant with you in the room. As we are a teaching hospital a student may also be present to observe the procedure. If you wish, you can request that the student is not present during your examination.

**What will happen on the day of the injection and preparation for the procedure**

On the day of treatment please take all your routine medications. If you are taking any medication to thin the blood, such as Warfarin, aspirin or clopidogrel, or you have a blood clotting disorder, please inform the booking clerk or the referring surgeon as soon as possible as your medication may need to be stopped for a time before the injection to prevent bleeding.
You may have a light breakfast e.g. toast and a cup of tea before your admission – at about 06:00 on the day of treatment.

Shortly before the injection you will need to change into a hospital gown.

After you have been admitted, you will be escorted into the CT scan room and your neuroradiologist will explain the procedure to you and offer you the chance to ask questions. Sedation (medication to calm you or put you to sleep) is not normally required for this procedure, but if you feel particularly anxious, it may be offered after discussion with your doctor. You will then be asked to sign a consent form to have sedation.

A small plastic needle (cannula) will be inserted into the back of your hand if you require sedation. You will be asked to lie on your front or side on the CT table. The area of your neck or lower back will be cleaned with antiseptic solution and some local anaesthetic will be injected into your skin. This will sting.

You may feel a pushing sensation or aggravation of the same pain you are experiencing as the needle is put into place. Images obtained by the CT scanner will be used during the procedure to help identify the correct position of the needle. You may feel pressure as the solution of local anaesthetic and steroid is injected. Then the needle will be removed, your neck or lower back will be cleaned and a dressing will be applied to the area where the injection has been given.

You will then be transferred onto a trolley and taken back to your ward where you will lie flat while you recover. Your blood pressure will be checked regularly for 1–2 hours and you will be advised to sit up gradually. You will be able to go home with an escort usually around two hours after your procedure. You must not drive yourself. You should not drive for 24 hours after the injection, as your insurance may not be valid if you are involved in an incident.
Aftercare and your pain diary

For the first few weeks following your injection it is important that you keep a pain diary, documenting any relief that you have had. Please carry this information with you when you return to the spinal clinic. Even a temporary reduction in pain is useful diagnostic information.

When can I shower/bathe?

The dressing can be removed the day after the procedure and you can then wet the area for example, in a shower. No new dressing needs to be applied.

When can I return to normal activity?

You may take up to six weeks to fully recover following the procedure despite a possible initial improvement. You may do gentle physical activity for 24–48 hours following the procedure. If your job is physical, up to 5 days of gentle activity is advisable before you return to your usual work. If your job is sedentary (desk-based) you may return to work within 48 hours.

Further information

For further information please contact your referring clinician via the telephone number on your appointment letter. Outside of normal office hours or at weekends and bank holidays, please contact your GP or their out-of-hours service for advice.
Please use the space below to write down any questions you may have and bring this with you to your next appointment.
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