

Nerve Root Injection

Background

- Nerves roots arise from the spinal cord, at either side of the spine, and extend from the neck to the lower back
- These nerves roots can become "pinched", inflamed or irritated with the bone tunnel that they originate from (foramen) , and can result in radicular pain, throughout the spine
- Sciatica is pinching of nerves in the lumbar (lower back) spine
- Nerve root injections are also referred to as foraminal injections and nerve sheath injections

Preparation

- If imaging has been performed elsewhere, please bring any previous relevant CT or MRI with you
- Please advise us at the time of booking if you taking on any blood thinning medication (Warfarin, Plavix, Aspirin), as some need to be stopped 5-7 days prior to the procedure
- Please arrange for a responsible adult to drive you home after the procedure

Potential Risks

- This is a commonly performed procedure, and generally does not result in serious complications
- Leg or arm numbness, "pins and needles", or weakness are not uncommon, due to local anaesthetic being injected next to the nerve, and usually resolves within a few hours
- Occasionally pain may become more intense immediately after the injection, and generally improves within a few hours
- Some may experience a transient mild headache, which typically resolves spontaneously, but may require paracetamol, rest and fluids
- The injected medication may cause facial blushing/redness, or a rash, which can last for a few days, before resolving
- The steroid may cause fluctuation on blood glucose levels in patients with diabetes, and close monitoring of BSL is recommended
- Local anaesthetic may leak into the fluid bathing the spine (CSF), and this can result in transient anaesthesia of the spine
- Although rare, serious risks include:
 - Infection: the majority (1-2%) are minor, however, can be serious (<0.1%) requiring intravenous antibiotics and hospital admission
 - Bleeding/Haematoma: rare, but particularly in patients on "blood thinning" medication, or bleeding disorders
 - Nerve irritation or damage: rare, due to direct needle penetration, or secondary to complications described above

Procedure

- The procedure takes up to 15 minutes, and is usually tolerated well
- You will be positioned on the CT table onto your stomach
- An initial low dose planning CT will be performed, to confirm the position for injection and best approach into the joint
- Your skin will be marked with a texta, and an antiseptic wash applied
- Short acting local anaesthetic is injected, which may sting for 10-30 seconds before numbing the region
- A very fine needle is advanced deeper, towards the bony tunnel (foramen) from which the spinal nerve emerges from
- The needle may need a few adjustments, until the needle tip is positioned next to the nerve
- The needle may contact the nerve, or cause pressure around the nerve, or may cause a sharp "electric shock" sensation that lasts for a second
- A combination of steroid and long acting anaesthetic is injected
- The local anaesthetic wears off after a few hours
- The steroid can take between 24 hours and up to 2 weeks for complete effect

Aftercare

- You may feel some minor discomfort at the site of injection
- The local anaesthetic should result in you being pain free for as short period of time
- You will be observed after the procedure, to ensure that you are stable on your feet, and can walk comfortably, following which you will be discharged
- Please do not drive for the rest of the day
- 48 hours of rest / reduced activity is recommended, with gradual return to normal activities

Injection Efficacy

- The steroid reduces the degree of inflammation and swelling around the nerve. This assists in reducing the pain and symptoms caused by inflammation and irritation
- Approximately 75% of patients experience reduced pain, 25% have no significant improvement, and 1% experience exacerbation of symptoms
- The average duration of symptom improvement is 8 weeks, and anywhere from a few days to several of months
- The duration varies from individual to individual, and unfortunately, cannot be accurately predicted prior to the procedure
- Occasionally multiple injections are required, and should be performed at least one month apart
- Unless otherwise specified, no more than 3 injections per nerve are recommended to be performed in 1 year