

Having a nerve block for rib fractures

Emergency Department

Information for Patients

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What are nerve blocks?

When bones (such as ribs) break (fracture), pain is often caused by the nerves in the muscles surrounding the broken bones. The serratus anterior is muscle at the side of the rib cage.

Local nerve blocks use local anaesthetic to directly block the nerves supplying these bones which have been broken. The local anaesthetic blocks the signals (including pain) travelling along the nerves so you will not feel the pain from the rib fractures. They are given like an injection through the skin, to the area where the nerve is. This is done using an ultrasound machine, so that we can see directly where the injection is going and to make sure other parts like blood vessels (arteries and veins) are not affected. The skin is made numb before we give the nerve block so it is not painful.

Why should I have a serratus anterior nerve block?

Nerve blocks directly target the area which is causing pain. They make it easier for you

- to move,
- take a deep breath and
- cough

when you have rib fractures. They also reduce the number of medicines like morphine which you will need. This reduces the side effects of these medicines.

What are the benefits of nerve blocks in rib fractures?

They give immediate and effective pain relief, meaning that you can breathe more easily, cough, take a deep breath and move more easily. This will help you sit up and move

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around earlier and lessens the chances of developing complications of rib fractures like pneumonias.

Nerve blocks mean you have less need for stronger pain killers such as codeine and morphine. These can make you feel sick, drowsy or lightheaded and may cause constipation.

What happens during the nerve block?

- We will clean the skin around the injection site.
- We will use a small injection of local anaesthetic to numb your skin. It does sting a little as it goes into the tissues.
- The clinician will use an ultrasound machine to see the area to be numbed directly.
- Most people find that the injection is no more painful than having a needle inserted into a vein.
- The area around the fractures will start to feel warm and tingly before feeling numb.
- The injection takes between 20 and 40 minutes to work.
- The doctor or nurse will check your pain, if you are able to take a deep breath and cough, about 30 minutes after the block.
- If the block does not work fully, you will be given more pain relief.

What happens afterwards and how long will the nerve block last?

The nerve block will last 8 to 12 hours. After this time, you may be offered

- a further block
- an infusion of the local anaesthetic
- pain killers given in a vein (intravenous) or by mouth

depending on your pain score.

What are the risks, side effects and complications?

Serious problems are uncommon but risk cannot be ruled out completely. Modern drugs, equipment and training have made nerve blocks safe procedures. All clinicians and nurses take a lot of care to avoid the risks below.

- Damage to the covering of the lung (less than 1 in 1,000). It can lead to some degree of collapse of the lung called a pneumothorax. Air goes into the space between the chest wall and the lung, called the pleural space. Treatment depends on how big this is. It may cause no symptoms at all and just be noticed on a chest X-ray. If it is large and you become short of breath, you may need a chest drain (a plastic tube) to help manage it.
- Puncturing a blood vessel: This is minimized by viewing where the needle is going under direct vision and by checks used when the local anaesthetic is injected.

- Having a fit or another life-threatening event. The clinical staff will manage these promptly and they can tell you more about these very rare events.
- Nerve damage. There may be numbness or tingling in your chest. These symptoms will resolve within 6 weeks in 95% of these patients and within a year in 99% of patients.
- Reaction to the local anaesthetic: The clinician or nurse will ask you about any reactions before giving you the nerve block. You will be closely checked for any signs of a reaction during and after the procedure.

Are there any other choices?

The other choices are to use morphine via a drip or by mouth, with painkillers like paracetamol.

Asking for your consent

It is important that you feel involved in decisions about your care. You will be given this information leaflet to read and discuss before consenting to a serratus anterior block. You will be asked if you agree to have the serratus anterior nerve block and understand what it involves. You can withdraw your consent at any time, even if you have **said yes before**.

Need more information?

Please speak to your responsible clinician

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Previous reference:

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