

Paravertebral Block 副脊椎阻滯止痛法

Introduction

Paravertebral space is located just next to the spine, where nerves come out of the spinal cord to supply the chest and abdominal wall. These nerves can be blocked by injection of medication into this space.

This block is used for:

- Postoperative pain control (thoracic, breast, renal and open cholecystectomy surgery)
- Ribs pain
- Other kind of chest wall pain

Medications used include:

- Local anaesthetics. The pain relief is rapid and may last for hours.
- Steroid which helps by reducing the inflammation and swelling of nerves. This decreases pain for a long period of time.

The Procedure

1. This procedure is usually done in operating room under sterile conditions.
2. The procedure is usually performed under local anaesthesia. Sedative agent may be administered.
3. An intravenous cannula is first inserted into your vein.
4. You will be asked to sit upright or lie laterally on your side.
5. Please keep still during the procedure to avoid any complication.
6. After disinfecting the skin in your back, the doctor will insert a needle into the paravertebral space, and local anaesthetic will be injected.
7. X-ray (with contrast) or ultrasound may be used to confirm correct needle position.
8. Sometimes, a catheter may be placed in the paravertebral space for further drug administration if needed.
9. The needle is removed and an adhesive bandage is applied.
10. The whole procedure will take about 30 to 45 minutes.

Risk and Complications

Generally, the procedure is safe. Like all other procedures, side effects and complications could occur, although in most cases these are uncommon and not serious. However, serious and potentially life threatening complication could occur in rare occasions.

Common risks and complications

- Mild pain at needle insertion site.
- Allergic reaction to medications and contrast injected but serious reaction is rare

Uncommon risks and complications

- Adverse effects related to steroid use are usually self-limiting because it is usually used in a low dose. These include facial flushing, insomnia, nightmares, nervousness and increased glucose level in diabetes. Whether low dose steroid leads to avascular necrosis remains controversial.
- Significant bleeding and hematoma formation
- Local anaesthetic related convulsion, arrhythmias or death.
- Pneumothorax. (Introduction of air into the cavity between the chest wall and the lungs due to needle puncture leading to shortness of breath. In severe cases a chest tube is inserted to drain the air. However most cases are mild and spontaneously resolve with oxygen treatment.)
- Nerve injury to the nerve plexus during injection.

Rare risks and complications

- Bacterial infection

Before the Procedure

- You may be requested to fast for at least 6 hours before the procedure.
- You should inform the medical staff of any past allergy, medical conditions and medications that you are taking, especially blood thinning medication (e.g. warfarin, clopidogrel).
- Ask your doctor whether you should continue your regular medication on the day of the procedure.
- Inform your doctor or nursing staff if you are, or think you may be pregnant.
- If you feel unwell on the day of procedure, please inform the Hospital to postpone the procedure.

After the Procedure

- You may resume oral intake only after being assessed by the nursing staff.
- If sedative has been used, you should avoid operating heavy machinery, signing legal documents or drive for the rest of the day.
- You should be accompanied by a family member or friend.

Follow Up

- A pain clinic follow up appointment will be arranged.
- In case there are any serious adverse effects or complications after the procedure, you should seek urgent medical advice.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor.

*Reference of occurrence rate

Very common	Common	Uncommon	Rare	Very rare
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Page 3 of 3

1 in 10	1 in 100	1 in 1000	1 in 10,000	1 in 100,000
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