

## **Epidurolysis 脊硬膜外疤痕消解治療**

### **Background**

Scarring is most commonly seen following back surgery and the subsequent healing process. The nerves may be compressed by the scar tissue and may be inflamed resulting in pain that radiates from the buttock to the toes. Epidurolysis is a procedure to dissolve the scar tissue around entrapped nerves in the epidural space. Clinical research has shown that this procedure is effective in improving pain relief and functional status in the short term and long term.

### **How does epidurolysis work?**

Epidurolysis breaks up the scar tissue, relieves the constriction on the nerves by separating the tissue and dissolving the scar by injection of different medications into the epidural space.

The injection may consist of saline to distend and separate the scar tissue, sometimes mixture of local anaesthetic and steroid may be used. X-ray contrast to visualize scarred space and hyaluronidase to break up scar tissue may be injected.

Immediately after the injection, you may feel slight heaviness and numbness over legs. Your pain may decrease or disappear completely after the procedure. This is due to the immediate effect of the injected local anaesthetic which will, however, wear off within few hours. The steroid takes about 1 week to work and the effect can last for several days to few months.

### **How is epidurolysis performed?**

1. This procedure is usually done in operating room under sterile conditions.
2. The procedure is usually performed under local anaesthesia. Sometimes a sedative agent may be administered.
3. An intravenous cannula is first inserted into your vein.
4. You will be asked to lie on your front for back injection.
5. Please keep still during the procedure to avoid any complication.
6. The doctor will disinfect the back with an anti-septic solution
7. Procedure will be done under X-ray guidance.

8. The skin and deeper tissues are numbed with a local anaesthetic using a very thin needle.
9. The procedure involves inserting a needle through skin into the epidural space.
10. A catheter (small tubing) is then inserted via this needle into the epidural space up to the area of scarring. Injection of medications is made via this catheter.
11. The procedure takes about 30 to 40 minutes to be completed.

### **What are the side effects and potential 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.

Potential side effects and complications include:

1. Pain at needle insertion site.
2. Bacteria infection is rare.
3. Bleeding and hematoma formation may occur.
4. Some patients may develop allergic reaction to medications and contrast injected, but serious reactions are uncommon.
5. The local anaesthetic might make you feel dizzy. While care is taken to avoid excessive doses, in extreme cases, it might cause convulsion, arrhythmias or death.
6. Adverse effects related to steroid use are temporary and uncommon because it is usually used in a low dose and for short term use. Adverse effects included facial flushing, insomnia, nightmares, nervousness and increased glucose level in diabetes.
7. X-ray radiation risk. Although you will only receive small dose of X-ray radiation, it is harmful to the fetal development. Please inform your doctor or nursing staff if you are, or think you may be, pregnant.
8. Dural puncture with headache which may require further management.
9. Broken catheter which may be retained in epidural space.
10. Spinal nerve damage.
11. Serious side effect such as paraplegia is rare.
12. Urinary retention which will self improved few hours after the procedure.

**Before the procedure**

You may be requested to fast for at least 6 hours before the procedure. Please ask your doctor or nurse about the need to fast. You should also inform medical staff of any past allergy, and major medical problems and inform them if you are taking antiplatelet and anticoagulation drugs. Ask your doctor whether you should continue your regular medication on the day of procedure. If you feel unwell on the day of procedure, please inform the Hospital to postpone the procedure to another day.

The procedure risks may increase and need further discussion if:

1. You are allergic to any of the medications to be injected
2. You are on a blood-thinning medication (e.g. warfarin)
3. You have an active infection

**After the procedure**

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

**Follow up**

A pain clinic follow up appointment will be arranged for you after the procedure. However, if serious adverse effect or complication develops after the procedure, you should seek medical advice at the nearest Accident and Emergency Department.

**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.