

Renal Services

The Use of Anticoagulation in Haemodialysis – Enoxaparin/Heparin

What is anticoagulation?

An anticoagulant is a substance that prevents coagulation (clotting) of blood. They do this by inhibiting the production of vitamin K in the liver. This increases the time your blood takes to clot. Although they are sometimes called blood thinners, they do not actually thin the blood. This type of medicine will not dissolve clots that already have formed, although it will help to stop an existing clot from getting larger.

Heparin and **Enoxaparin** are the two main anticoagulant drugs used during haemodialysis treatment. They are used to preventing blood from clotting when it is filtered through an 'artificial kidney' (haemodialysis) machine as part of the management of kidney failure.

What is the difference between Enoxaparin and Heparin?

They are both anticoagulants. **Heparin** is sometimes called 'standard heparin' and is given as an infusion over three to four hours during haemodialysis. **Enoxaparin** is made from Heparin but used differently to Heparin; it is designed to last much longer in the body and is given as a one off injection into the arterial port of your dialysis blood lines at the beginning of dialysis.

Taking other medicines

Some medicines and anticoagulants may interfere with each other. These include:

- Medicines or substances used to prevent and treat blood clots;
- Medicines containing aspirin or salicylates;
- Dextran 40, a medicine used to treat shock;
- Medicines used to treat inflammatory disease, such as oral non-steroidal anti-inflammatory medicines or corticosteroids.

Precautions to take if receiving anticoagulation treatments

Ask your Doctor whether there are any activities you should avoid while receiving anti-coagulants, for example, certain sports. Sometimes after injury bleeding may occur inside your body without you knowing about it.

Tell your Doctor if you experience any of the following:

- Difficulty in breathing, symptoms of hay fever, feeling faint, itchy hives, blisters or other symptoms of allergy;



Patient Information

- Bleeding, including nose bleed or prolong bleeding from cuts;
- Bruising more easily than normal;
- Red or dark brown urine;
- Red or black bowel motions;
- Numbness, problems with co-ordination, dizziness, blurred vision, confusion;
- Severe abdominal pain;
- Chest pain;
- Headache;
- A fine widespread rash, especially noticeable on your mouth or eyes or sudden onset of white or blue colour in fingers or toes suggesting poor blood supply.

Jewish and Muslim patients

Enoxaparin and Heparin are derived from the intestines of pigs. Whilst there is an alternative dosage for the treatment of thrombosis there is currently no suitable alternative for the use on dialysis. Enoxaparin and Heparin are used at centres in Jewish and Muslim countries.

All Jewish medical issues are based on the principles of Jewish Law (Holochoh). Jewish Law permits the consumption of porcine and other non-kosher materials in a non-edible manner in the case of illness, even if that illness is not life threatening. So for example, there are no restrictions or prohibitions on the injection, or other parenteral methods (non-gastro-intestinal), of administration of non-kosher products such as insulin of porcine or bovine origin.

Further Information

For further information contact:

Renal Pharmacist: 02476 966785/ Renal Department: 02476967777

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