Package leaflet: Information for the user

Levosimendan 2.5 mg/ml concentrate for solution for infusion

levosimendan

Read all of this leaflet carefully before you are given this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or nurse.
- If you get any side effects, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Levosimendan is and what it is used for

Levosimendan is a concentrated form of a medicine, which must be diluted before it is given to you as an infusion into your veins.

Levosimendan works by increasing the pumping force of the heart and allows blood vessels to relax. Levosimendan will lessen the congestion in your lungs and make it easier for blood and oxygen to go through your body. This medicine will help to relieve the shortness of breath from severe heart failure.

Levosimendan is used for the treatment of heart failure, in people who still find it hard to breathe, even though they are taking other medicines to get rid of extra water from the body.

Levosimendan is used in adults.

2. What you need to know before you are given Levosimendan

You should not be given Levosimendan if:
- you are allergic to levosimendan or to any of the other ingredients of this medicine (listed in section 6);
- you have very low blood pressure or an abnormally fast heartbeat;
- you have severe kidney or liver disease;
- you have a heart disease which makes filling or emptying of the heart harder;
- you have been told by your doctor that you have ever had an abnormal heartbeat called *Torsades de Pointes*.

Warnings and precautions
Talk to your doctor or nurse before you are given this medicine if:
- you have any kidney or liver disease;
- you have low blood counts (anaemia) and chest pain;
- you have an abnormally fast heartbeat, an abnormal heart rhythm or have been told by your doctor that you have a heart condition called ‘atrial fibrillation’ or an abnormally low amount of potassium in your blood;
- you have low blood pressure;
- you have severe decrease of blood volume in your body (hypovolaemia).

Your doctor should use this medicine very carefully. If you are not sure if any of the above applies to you, talk to your doctor or nurse.

Children and adolescents
This medicine should not be given to children and adolescents under 18 years of age.

Other medicines and Levosimendan
Tell your doctor or nurse, if you are using, have recently used or might use any other medicines.
If you have been given other heart medicines through your veins, your blood pressure may drop if you are given levosimendan.
Tell your doctor or nurse if you are taking isosorbide mononitrate (used to treat angina (chest pain)), as levosimendan may increase drop of your blood pressure when getting up.

Pregnancy and breast-feeding
If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before this medicine is given to you.
It is not known if this medicine affects your baby. Your doctor will have to decide if the benefits to the mother outweigh the possible risk to a baby.
There are indications that levosimendan passes into human breast milk. You should not breast-feed while you are given this medicine in order to avoid potential cardiovascular side effects in the infant.

Levosimendan contains alcohol
This medicine contains 3925 mg of alcohol (anhydrous ethanol) in each 5 ml vial, which is equivalent to 785 mg/ml (approximately 98 % w/v). The amount in one 5 ml vial of this medicine is equivalent to 99.2 ml beer or 41.3 ml wine.
The amount of alcohol in this medicine can affect your ability to drive or use machines. This is because it may affect your judgement and how fast you react.
If you are pregnant or have epilepsy or liver problems, talk to your doctor or nurse before this medicine is given to you.
The amount of alcohol in this medicine may alter the effects of other medicines. Talk to your doctor or nurse if you are taking other medicines.
If you are addicted to alcohol, talk to your doctor or nurse before this medicine is given to you.
Because this medicine is usually given slowly over 24 hours, the effects of alcohol may be reduced.

3. How Levosimendan is given

This medicine will be given to you as an infusion (drip) into your veins. This is why you should only be given this medicine in a hospital where the doctor can monitor you.

Your doctor will decide how much medicine you should be given. Your doctor will measure how you respond to treatment (e.g. by measuring your heart rate, blood pressure, by electrocardiogram (ECG), and/or by asking you how you are feeling). Your doctor may then change your dose, if needed. The doctor may want to monitor you for up to 4-5 days after this medicine is stopped.

You may be given a fast infusion over 10 minutes, followed by a slower infusion for up to 24 hours.

Your doctor should check to see how you respond to levosimendan from time to time. He may decrease your infusion if your blood pressure drops or your heart starts to beat too fast or you do not feel well. Tell your doctor or nurse if you feel your heart racing, if you are light-headed or if you feel that the effect of this medicine is too strong or too weak.

If the doctor feels you need more levosimendan and you aren’t having side effects, he/she may increase your infusion.

Your doctor will continue your levosimendan infusion for as long as you need it to support your heart. Usually this is for 24 hours.

The effect on your heart will last for at least 24 hours after levosimendan infusion is stopped. The effect may continue for 7-10 days after the infusion is stopped.

Kidney impairment
This medicine must be used with caution in patients with mild to moderate kidney impairment. Levosimendan should not be used in patients with severe kidney impairment (see section 2, *You should not be given Levosimendan*).

Liver impairment
This medicine must be used with caution in patients with mild to moderate liver impairment, although no dose adjustment appears necessary for these patients. Levosimendan should not be used in patients with severe liver impairment (see section 2, *You should not be given Levosimendan*).

If you get more Levosimendan than you should
If you are given too much of this medicine, your blood pressure may drop and your heartbeat may get faster. Your doctor will know how to treat you based on your condition.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Very common (may affect more than 1 in 10 people)
- Headache
- Abnormally fast heartbeat
- Drop in blood pressure

Common (may affect up to 1 in 10 people)
- Low amount of potassium in your blood
- Insomnia
- Dizziness
- An abnormal heartbeat called ‘atrial fibrillation’ (a part of the heart flutters instead of beating properly)
- Increased heart rate
- Extra heartbeats
- Heart failure
- Your heart doesn’t get enough oxygen
- Nausea
- Constipation
- Diarrhoea
- Vomiting
- Low blood counts

Abnormal heartbeat called ‘ventricular fibrillation’ (a part of the heart flutters instead of beating properly) has been reported in patients who received levosimendan.

Inform your doctor immediately if you experience side effects. Your doctor may reduce the rate of infusion or stop levosimendan infusion.

Reporting of side effects
If you get any side effects, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via HPRA Pharmacovigilance, Website: www.hpra.ie. By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Levosimendan

Keep this medicine out of the sight and reach of children.

Store in a refrigerator (2 °C – 8 °C).

The colour of the concentrate may turn to orange during storage, but there is no loss of potency and the product may be used until the indicated expiry date if storage instructions have been followed.

Shelf life after dilution
Chemical and physical in-use stability has been demonstrated for 24 hours at 2-8 °C and 25 °C. From a microbiological point of view, the product should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user and would normally not be longer than 24 hours at 2 to 8 °C.

Do not use this medicine after the expiry date which is stated on the label and carton after EXP. The expiry date refers to the last day of that month.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Levosimendan contains
- The active substance is levosimendan.

Each ml of concentrate contains 2.5 mg levosimendan.
Each vial with 5 ml of solution contains 12.5 mg levosimendan.

- The other ingredients are povidone K 12, citric acid and ethanol anhydrous.

What Levosimendan looks like and contents of the pack
Clear yellow or orange solution, practically free from visible particles.
5 ml solution in colourless glass vial closed with rubber stopper, with plastic flip-off cap and aluminium seal. Vials are packed in outer cartons.

Pack sizes: 1 or 4 vials

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer
AS KALCEKS
Krustpils iela 71E, Riga, LV-1057, Latvia
Tel.: +371 67083320
E-mail: kalceks@kalceks.lv

This leaflet was last revised in 02/2022

The following information is intended for healthcare professionals only:

Instructions for use and handling
For single use only.

The medicinal product should be visually inspected prior to use. Only clear solutions free from particles should be used.

Once opened, the medicinal product should be used immediately. Any remaining contents should be discarded.

Levosimendan 2.5 mg/ml concentrate for solution for infusion should not be diluted into a higher concentration than 0.05 mg/ml as instructed below, otherwise opalescence and precipitation may occur.

- To prepare the 0.025 mg/ml infusion, mix 5 ml of Levosimendan 2.5 mg/ml concentrate for solution for infusion with 500 ml of 5 % glucose or 0.9 % sodium chloride solution for infusion.
- To prepare the 0.05 mg/ml infusion, mix 10 ml of Levosimendan 2.5 mg/ml concentrate for solution for infusion with 500 ml of 5 % glucose or 0.9 % sodium chloride solution for infusion.

As for all parenteral medicinal products, inspect the diluted solution visually for particulate matter and discolouration prior to administration.

The following medicinal products can be given simultaneously with levosimendan in connected intravenous lines:
- Furosemide 10 mg/ml
- Digoxin 0.25 mg/ml
- Glyceryl trinitrate 0.1 mg/ml.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

Posology and method of administration
Levosimendan is for in-hospital use only. It should be administered in a hospital setting where adequate monitoring facilities and expertise with the use of inotropic agents are available.

Levosimendan is to be diluted prior to administration.
The infusion is for intravenous use only and can be administered by the peripheral or central route.

Please refer to the Summary of Product Characteristics for posology information.