Package leaflet: Information for the user
Dexmedetomidine 100 micrograms/mL concentrate for solution for infusion
Dexmedetomidine

Read all of this leaflet carefully before you start using 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, pharmacist or nurse.
- If you get any side effects, talk to your doctor. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What is Dexmedetomidine and what it is used for
Dexmedetomidine contains an active substance called Dexmedetomidine which belongs to a medicine group called sedatives. It is used to provide sedation (a state of calm, drowsiness or sleep) for adult patients in hospital intensive care settings or awake sedation during different diagnostic or surgical pro cedures.

2. What you need to know before you are given Dexmedetomidine :
You must not be given Dexmedetomidine :
- if you are allergic to Dexmedetomidine or any of the other ingredients of this medicine (listed in section 6).
- if you have some disorders of heart rhythm (heart block grade 2 or 3).
- if you have very low blood pressure which does not respond to treatment.
- if you have recently had a stroke or other serious condition affecting blood supply to the brain.

Warnings and precautions
Before you are given this medicine, tell your doctor or nurse if any of the following apply as Dexmedetomidine should be used cautiously:

- if you have an abnormally slow heart rate (either due to illness or high levels of physical fitness) as it may increase the risk for cardiac arrest
- if you have low blood pressure
- if you have low blood volume, for example after bleeding
- if you have certain heart disorders
- if you are elderly
- if you have a neurological disorder (for instance head or spinal cord injury or stroke)

- if you have severe liver problems
- if you have ever developed a serious fever after some medicines, especially anaesthetics

This medicine may cause large amount of urine and excessive thirst, contact a doctor if these side effects occur. See section 4 for more information.

An increased risk of mortality has been observed in patients 65 years of age and younger when using this medication, especially in patients admitted to the intensive care unit for reasons other than postoperative care, with more severe illness on admission to the care unit intensive and with a younger age. The doctor will decide if this medicine is still suitable for you. The doctor will consider the benefits and risks of this medicine for you, in comparison with treatment with other sedatives.

Other medicines and Dexmedetomidine
Tell your doctor or nurse if you are taking, have recently taken or might take any other medicines.

<u>The following medicines may enhance the effect of Dexmedetomidine</u>
- medicines that help you sleep or cause sedation (e.g. midazolam, propofol)
- strong pain medicines (e.g. opioids such as morphine, codeine)
- anaesthetic medicines (e.g. sevoflurane, isoflurane)

If you are using medicines which lower your blood pressure and heart rate, co-administration with Dexmedetomidine may enhance this effect. Dexmedetomidine should not be used with medicines that cause temporary paralysis.

Pregnancy, breast-feeding and fertility
Dexmedetomidine should not be used during pregnancy or breast-feeding unless clearly necessary.

Ask your doctor or pharmacist for advice before taking this medicine.

Driving and using machines
Dexmedetomidine has major impact on the ability to drive and use machines.
After you have been given Dexmedetomidine you must not drive, operate machinery, or work in dangerous situations. Ask your doctor when you can start doing these activities again and when you can go back to this kind of work.

Dexmedetomidine contains sodium
This medicine contains less than 1 mmol sodium (23 mg) per ampoule, that is to say essentially `sodium-free´.

This medicine contains 37 mg sodium (main component of cooking/table salt) in each 10 mL vial. This is equivalent to 2 % of the recommended maximum daily dietary intake of sodium for an adult.

3. How to use Dexmedetomidine

Hospital intensive care

Dexmedetomidine is administered to you by a doctor or nurse in hospital intensive care.

Procedural sedation/awake sedation
Dexmedetomidine is administered to you by a doctor or nurse prior to and/or during diagnostic or surgical procedures requiring sedation, i.e. procedural/awake sedation.

Your doctor will decide on a suitable dose for you. The amount of Dexmedetomidine depends on your age, size, general condition of health, the level of sedation needed and how you respond to the medicine. Your doctor may change your dose if needed and will monitor your heart and blood pressure during the treatment.

Dexmedetomidine is diluted and it is given to you as an infusion (drip) into your veins.

After sedation/wake-up
- The doctor will keep you under medical supervision for some hours after the sedation to make sure that you feel well.
- You should not go home unaccompanied.
- Medicines to help you sleep, cause sedation or strong painkillers may not be appropriate for some time after you have been given Dexmedetomidine. Talk to your doctor about the use of these medicines and about the use of alcohol.

If you have been given more Dexmedetomidine than you should
If you are given too much Dexmedetomidine, your blood pressure may go up or down, your heartbeat may slow down, you may breathe more slowly, and you may feel more drowsy. Your doctor will know how to treat you based on your condition.

If you have any further questions on the use of this medicine, ask your doctor.

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

Very common (*affects more than 1 user in 10*)
- slow heart rate
- low or high blood pressure.
- change in breathing pattern or stopping breathing.

Common (*affects 1 to 10 users in 100*)
- chest pain or heart attack
- fast heart rate
- low or high blood sugar
- nausea, vomiting or dry mouth
- restlessness
- symptoms after stopping the medicine
- high temperature

Uncommon (*affects 1 to 10 users in 1,000*)
- a condition where there is too much acid in the body
- low albumin level in blood

- shortness of breath
- hallucinations
- reduced heart function, cardiac arrest.
- the medicine is not effective enough.
- swelling of the stomach
- thirst

Not known (frequency cannot be estimated from the available data)
- large amount of urine and excessive thirst – may be symptoms of a hormonal disorder called diabetes insipidus. Contact a doctor if these occur.

Reporting of side effects
If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system Yellow Card Scheme Website: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store. By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Dexmedetomidine
Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the label and carton after EXP.

This medicine does not require any special temperature storage conditions. Keep the ampoules and vials in the outer carton in order to protect from light.

6. Contents of the pack and other information

What Dexmedetomidine contains
The active substance is Dexmedetomidine. Each mL of concentrate contains Dexmedetomidine hydrochloride equivalent to 100 micrograms of Dexmedetomidine.

The other ingredients are sodium chloride, sodium hydroxide (for pH adjustment), hydrochloric acid (for pH adjustment) and water for injections.

Each 2 mL ampoule contains 200 micrograms of Dexmedetomidine (as hydrochloride).
Each 4 mL vial contains 400 micrograms of dexmedetomidine (as hydrochloride).
Each 10 mL vial contains 1000 micrograms of dexmedetomidine (as hydrochloride).

The concentration of the final solution after dilution should be either 4 micrograms/mL or 8 micrograms/mL.

What Dexmedetomidine looks like and contents of the pack
Concentrate for solution for infusion (sterile concentrate).
The concentrate is a clear, colourless solution.

Containers

2 mL glass ampoules
6 or 10 mL glass vials

Pack sizes
5 x 2 mL ampoules
25 x 2 mL ampoules
4 x 4 mL vials
4 x 10 mL vials

Not all pack sizes may be marketed.

Marketing Authorisation Holder
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Manufacturer Responsible for Batch Release:
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Detailed information on this medicine is available on the website of MS/Agency
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The following information is intended for healthcare professionals only:

Dexmedetomidine 100 micrograms/mL concentrate for solution for infusion

Method of administration
Dexmedetomidine should be administered by healthcare professionals skilled in the management of patients requiring intensive care or in the anaesthetic management of patients in the operating room or undergoing diagnostic procedures. It must be administered only as a diluted intravenous infusion using a controlled infusion device.

Preparation of solution
Dexmedetomidine can be diluted in glucose 50 mg/mL (5%), Ringers, mannitol or sodium chloride 9 mg/mL (0.9%) solution for injection to achieve the required concentration of either 4 micrograms/mL or 8 micrograms/mL prior to administration. Please see below in tabulated form the volumes needed to prepare the infusion.

In the case the required concentration is 4 micrograms/mL:

Volume of Dexmedetomidine 100 micrograms/mL concentrate for solution for infusion	Volume of diluent	Total volume of infusion
2 mL	48 mL	50 mL
4 mL	96 mL	100 mL
10 mL	240 mL	250 mL
20 mL	480 mL	500 mL

In the case the required concentration is 8 micrograms/mL:

Volume of Dexmedetomidine 100 micrograms/mL concentrate for solution for infusion	Volume of diluent	Total volume of infusion
4 mL	46 mL	50 mL
8 mL	92 mL	100 mL
20 mL	230 mL	250 mL
40 mL	460 mL	500 mL

The solution should be shaken gently to mix well.
Dexmedetomidine should be inspected visually for particulate matter and discoloration prior to administration.

Dexmedetomidine has been shown to be compatible when administered with the following intravenous fluids and medicinal products:

Lactated Ringers, 5% glucose solution, sodium chloride 9 mg/mL (0.9%) solution for injection, mannitol 200 mg/mL (20%), dexametasone 4 mg, magnesium sulfate 10 mg/kg and 40 mg/kg, sufentanile 10 mcg/mL.

Shelf life
After dilution:
Chemical and physical stability of the diluted infusion (Infusion Solution Stability) has been demonstrated for 24 hours at 25°C and at refrigerated conditions (2°C – 8°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 the use are the responsibility of the user and would not normally be longer than 24 hours at 2° to 8°C, unless dilution has taken place in controlled and validated aseptic conditions.