TECHNICAL NOTES

Medetate®

Injection

Active Constituents

Medetomidine hydrochloride 1 mg/mL

Actions

Medetomidine is a potent, selective and specific alpha-2 adrenoceptor agonist. Alpha-2 adrenoceptor activation by medetomidine induces a dose-dependent decrease in the release and turnover of noradrenaline in the central nervous system, which is manifested as sedation, analgesia and bradycardia. In the periphery, medetomidine causes vasoconstriction by activating postsynaptic alpha-2 adrenoceptors in the vascular smooth muscle. Thus the blood pressure initially increases after medetomidine injection due to an increase in systemic vascular resistance. The pressure reverts to normal or slightly below within 1 to 2 hours. The respiratory frequency may transiently be lowered.

The duration and degree of the sedative and analgesic effects depend on the dose administered. During maximal effect the animal is relaxed, lies down and does not react to external stimuli. Marked synergistic effects have been demonstrated between medetomidine and cyclohexamine compounds such as ketamine, and between medetomidine and opiate drugs such as fentanyl, producing deep anaesthesia. Similarly medetomidine has a very potent ability to reduce dose requirements of intravenous and inhalation anaesthetics.

Medetomidine is rapidly absorbed after intramuscular injection. Peak concentration is reached within 15-20 minutes. It is readily metabolised and excreted in the urine and in the faeces (half lives of elimination ranging from 1 to 1.6 hours).

Indications

For use as a sedative and analgesic in the restraint of dogs and cats.
Dogs: A sedative and analgesic for use in the restraint of dogs for clinical examinations and procedures, minor surgery and pre-anaesthesia.
Cats: A sedative for restraint.

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Dosage and Administration

Once broached, the product must be used within 3 months.
For parenteral use by intramuscular or intravenous injection in dogs and intramuscular injection in cats.

Effect	Dose (µg/kg)	Volume (mL/10 kg)
DOGS (I/M or I/V injection)		
Slight sedation	10 - 30	0.1 - 0.3
Moderate to deep sedation + analgesia	30 - 80	0.3 - 0.8
Pre-anaesthesia	10 - 20	0.1 - 0.2
Effect	**Dose (µg/kg)**	**Volume (mL/5 kg)**
CATS (I/M injection)		
Moderate sedation	50 - 100	0.25 - 0.50
Deep sedation	100 - 150	0.50 - 0.75

To get an equal effect, the higher recommended doses per kg bodyweight have to be used in small dogs compared to large dogs.

Maximal effect is obtained within 10 – 15 minutes. Duration of the clinically useful effect is dose related - 30 to 120 minutes (sedation), 30 to 150 minutes (analgesia). The dose can be repeated if necessary. The duration of analgesia is generally shorter than the duration of sedation. Both analgesic and sedative effects are reversed with the use of atipamezole injection.

Overdose: In case of overdosage, atipamezole can be used. The administration of anticholinergic agents (atropine or glycopyrrolate) to treat bradycardia, either simultaneously with medetomidine or following medetomidine, could lead to adverse cardiovascular effects.

Antagonist: The effects of this product can be reversed with atipamezole.

Contraindications

The use of Medetate® Injection in pregnancy has not been monitored in sufficient animals and is, therefore, not recommended. Medetate® Injection should not be used in conjunction with sympathomimetic amines.

Warnings and Precautions

Care should be taken with the use of Medetate® Injection in animals with cardiovascular, respiratory, liver and kidney disease, hypotension, shock or in poor general health. The concomitant use of other CNS depressants may potentiate the depressant effects of either product, and appropriate dose adjustments should be made. Due to the potent pharmacological activity of medetomidine, skin contact with Medetate® Injection should be avoided. Wipe off excess spillage on skin of animals.

Side Effects

Due to the mechanism of action of Medetate® Injection, heart rate and body temperature decrease. Treated animals should be kept warm in an even temperature for 12 hours after sedation. Blood pressure will initially increase and then return to normal or slightly below. This is accompanied by a compensatory decrease in heart rate. Some dogs and most cats will vomit (particularly if recently fed) 5 to 10 minutes post-injection. Some cats may also vomit at recovery. Occasionally muscle jerking in limbs has been observed.

First Aid

If poisoning occurs, contact a doctor or Poisons Information Centre on 13 1126.

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Disposal

Dispose of empty container by wrapping with paper and putting in the garbage.

Presentation

Clear solution
10 mL glass vial

Storage

Store below 30°C (room temperature). Protect from light. Store vials upright. Do not freeze. Once broached, the product must be used within 3 months.

Poisons Schedule

S4.

Registration Number

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