1 NAUSICALM SOLUTION FOR INJECTION

Cyclizine lactate 50mg/mL solution for injection

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 1 mL ampoule contains 50 mg cyclizine lactate.

For a full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Nausicalm solution for injection is a clear colourless solution, presented in 1 mL ampoules.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Nausicalm is indicated for the prevention and treatment of nausea and vomiting including:

- Motion sickness
- Nausea and vomiting caused by narcotic analgesics and by general anaesthetics in the post-operative period.
- Vomiting associated with radiotherapy, especially for breast cancer since cyclizine does not elevate prolactin levels.
- Intravenous Nausicalm is indicated pre-operatively in patients undergoing emergency surgery to reduce the hazard of regurgitation and aspiration of gastric contents during induction of general anaesthesia.
- Nausicalm may be of value in relieving vomiting and attacks of vertigo associated with Meniere's disease and other forms of vestibular disturbance.

4.2 Dose and method of administration

For adult administration only.

The recommended dose is 50 mg administered intramuscularly (IM) or intravenously (IV), which may be repeated up to three times a day.

When used intravenously, Nausicalm injection should be injected slowly, undiluted, into the bloodstream with only minimal withdrawal of blood into the syringe.

To prevent post-operative vomiting the first dose should be given by slow IV injection 20 minutes before the anticipated end of surgery.

Cyclizine given IV, in half the recommended dose, increases the lower oesophageal sphincter tone thus reducing the hazard of regurgitation and aspiration of gastric contents when given to patients undergoing emergency surgery before the induction of general anaesthesia.

There have been no specific studies of cyclizine in the elderly. Experience has indicated that the normal adult dosage is appropriate.

4.3 Contraindications

Nausicalm should not be given to individuals with known hypersensitivity to cyclizine.

4.4 Special warnings and precautions for use

As with other anticholinergic agents, Nausicalm should be used with caution and appropriate monitoring in patients with glaucoma, obstructive disease of the gastrointestinal tract, hepatic disease, epilepsy and in males with possible prostatic hypertrophy.

Nausicalm should be used with caution in patients with severe heart failure. In such patients, cyclizine may cause a fall in cardiac output associated with increases in heart rate, mean arterial pressure and pulmonary wedge pressure.

There have been no specific studies of cyclizine in patients with hepatic and/or renal dysfunction.

There have been reports of abuse of cyclizine for its euphoric or hallucinatory effects. The concomitant use of cyclizine with large amounts of alcohol is particularly dangerous as the anti-emetic effect of the cyclizine may increase the toxicity of the alcohol.

There have been isolated case reports of transient paralysis occurring in patients using intravenous cyclizine. Two of the patients mentioned in these reports had an underlying neuromuscular disorder. Thus intravenous cyclizine should be used with caution in all patients in general, and in patients with underlying neuromuscular disorders in particular.

4.5 Interaction with other medicines and other forms of interaction

Cyclizine may have additive effects with alcohol and other central nervous system depressants e.g. hypnotics, tranquillisers. Cyclizine enhances the soporific effect of pethidine. Because of its anticholinergic activity cyclizine may enhance the side-effects of other anticholinergic drugs.

4.6 Fertility, pregnancy and lactation

Category B3

Some animal studies are interpreted as indicating that cyclizine may be teratogenic.

In a study involving prolonged administration of cyclizine to male and female rats there was no evidence of impaired fertility after continuous treatment for 90 to 100 days. There is no experience of the effect of cyclizine on human fertility.

It is not known whether cyclizine or its metabolites are excreted in human milk.

4.7 Effects on ability to drive and use machines

Studies designed to detect drowsiness did not reveal sedation in healthy adults who took a single oral therapeutic dose (50 mg) of cyclizine.

Patients should not drive or operate machinery until they have determined their own response.

Although there are no data available, patients should be cautioned that cyclizine may have additive effects with alcohol and other central nervous system depressants, e.g. hypnotics and tranquillisers.

4.8 Undesirable effects

Eye disorders: oculogyric crisis

General disorders and administration site conditions: asthenia. Injection site reactions including vein tracking, erythema, pain, thrombophlebitis and blisters. A sensation of heaviness, chills and pruritus have been reported rarely.

Hepatobiliary disorders: hepatic dysfunction, hypersensitivity hepatitis, cholestatic jaundice and cholestatic hepatitis.

Musculoskeletal and connective tissue disorders: twitching, muscle spasms

Nervous System Disorders: somnolence, headache, dystonia, dyskinesia, extrapyramindal motor disturbances, tremor, convulsions, dizziness, decreased consciousness, transient speech disorders, paraesthesia

Psychiatricdisorders: disorientation, agitation

Respiratory, thoracic andmediastinal disorders: bronchospasm, apnoea

Skin and subcutaneous tissue disorders: urticaria, drug rash, angioedema

Vascular Disorders: hypertension, hypotension
Drowsiness, dryness of the mouth, nose and throat, blurred vision, tachycardia, urinary retention, constipation, restlessness, nervousness, insomnia and auditory and visual hallucinations have been reported, particularly when dosage recommendations have been exceeded.

Following oral administration, single case reports have been documented of:

fixed drug eruption;

generalisedchorea;

hypersensitivity hepatitis;

agranulocytosis.

A single case of anaphylaxis has been recorded following intravenous administration of cyclizine co-administered with propanidid in the same syringe.

An increase in excitatory phenomena (tremor and muscle movements) has been reported when cyclizine has been given before propanidid andmethohexitone anaesthesia.

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals are asked to report any suspected adverse reactions https://nzphvc.otago.ac.nz/reporting/

4.9 Overdose

Symptoms: Symptoms of acute toxicity from cyclizine arise from peripheral anticholinergic effects and effects on the central nervous system.

Peripheral anticholinergic symptoms include, dry mouth, nose and throat, blurred vision, tachycardia and urinary retention. Central nervous system effects include drowsiness, dizziness, inco-ordination, ataxia, weakness, hyperexcitability, disorientation, impaired judgement, hallucinations, hyperkinesia, extrapyramidal motor disturbances, convulsions, hyperpyrexia and respiratory depression.

Treatment: In the management of acute overdosage with cyclizine, gastric lavage and supportive measures for respiration and circulation should be performed if necessary. Convulsions should be controlled in the usual way with parenteral anticonvulsant therapy.

For advice on the management of overdose please contact the National Poisons Centre on 0800 POISON (0800 764766).

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Cyclizine is a piperazine derivative with the general properties of H1-blocking drugs including antimuscarinic activity, but is used as an anti-emetic in a variety of clinical situations including drug-induced and motion sickness, vertigo, post-operative vomiting and radiation sickness. The mechanism of the anti-emetic effect is unclear. Cyclizine also possesses anticholinergic activity but does not have marked sedative effects.

5.2 Pharmacokinetic properties

Cyclizine produces its antiemetic effect within 2 hours and lasts approximately 4 hours.
Cyclizine is metabolised in the liver. It is extensively N-demethylated to the inactive metabolite norcyclizine which is widely distributed throughout the tissues with a plasma half-life of approximately 20 hours.

5.3 Preclinical safety data

See section 4.6.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Water for injection.

6.2 Incompatibilities

None known.

6.3 Shelf life

24 months

6.4 Special precautions for storage

Store below 25°C. Protect from light.

6.5 Nature and contents of container

Each pack contains 5 ampoules

6.6 Special precautions for disposal

No special precautions for disposal.

7 MEDICINE SCHEDULE

Prescription medicine

8 SPONSOR

AFT Pharmaceuticals Ltd
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9 DATE OF FIRST APPROVAL

19/07/2007

10 DATE OF REVISION OF THE TEXT

November 2018

SUMMARY TABLE OF CHANGES

Date	Section(s) Changed	Change (s)

November 2018	All	Reformat consistent with new Medsafe Data Sheet Template.