APPROVED PACKAGE INSERT

SCHEDULING STATUS

S2

PROPRIETARY NAME AND DOSAGE FORM

Fresenius Glycopyrrolate Injection 0,2 mg/1 ml

Fresenius Glycopyrrolate Injection 0,4 mg/2 ml

Injection

COMPOSITION

Each 1 ml contains glycopyrrolate 0,2 mg

Inactive ingredients: Sodium hydroxide, hydrochloric acid, nitrogen and water for injection.

PHARMACOLOGICAL CLASSIFICATION

A 5.4 Cholinolytics (Anticholinergics)

PHARMACOLOGICAL ACTION

Pharmacodynamic properties:

Glycopyrrolate is a muscarinic receptor antagonist.

Pharmacokinetic properties:

Glycopyrrolate penetrates the blood-brain barrier poorly. Following intramuscular or subcutaneous administration, onset of effects occurs within 15 - 30 minutes. Vagal blocking effects last for 2 - 3 hours and antisialogogue effects persist up to 7 hours. Peak effects after intramuscular or subcutaneous injection occur after 30 - 45 minutes.

Following intravenous administration onset of action occurs within one minute.

Glycopyrrolate is excreted in bile and urine. The renal elimination of glycopyrrolate is considerably prolonged in patients with uraemia. In a 24 hour period the mean amount of dose excreted was 5 % in normal patients and 7 % in uraemic patients.

INDICATIONS

Fresenius Glycopyrrolate Injection is used pre-operatively to decrease salivary, tracheobronchial and pharyngeal secretions; decrease gastric secretions and acidity and block the effects of vagal stimulation during anaesthesia and surgery. It also antagonises the peripheral muscarinic effects, such as bradycardia and excessive secretions of cholinergic agents used to reverse neuromuscular blockade due to non-depolarising muscle relaxants e.g. neostigmine and pyridostigmine.

CONTRA-INDICATIONS

Fresenius Glycopyrrolate Injection is contraindicated in:

Patients with known hypersensitivity to glycopyrrolate or any of the ingredients of Fresenius Glycopyrrolate Injection.

Patients with prostatic enlargement (in whom it may lead to urinary retention).

Patients with paralytic ileus or pyloric stenosis.

WARNINGS AND SPECIAL PRECAUTIONS

Use with extreme caution in patients suffering from glaucoma or asthma.

Fresenius Glycopyrrolate Injection should be used with caution in children and the elderly.

It should also be used with caution in the following conditions:

ulcerative colitis, diarrhoea, myasthenia gravis, in patients with a fever or where the ambient temperature is high (as it can provoke hyperthermia), conditions characterised by tachycardia (thyrotoxicosis, heart failure and in cardiac surgery), myocardial infarction and hypertension as well as in coronary artery disease.

Effects on ability to drive and use machines

Fresenius Glycopyrrolate Injection may cause blurred vision and dizziness that may impair a patient's ability to drive vehicles and operate machinery.

INTERACTIONS

The effect of Fresenius Glycopyrrolate Injection may be enhanced by the concomitant administration of other medicines with antimuscarinic properties, e.g. amantadine, antihistamines, phenothiazine antipsychotics and tricyclic antidepressants.

Chemical incompatibilities:

Fresenius Glycopyrrolate Injection is incompatible with alkalis.

PREGNANCY AND LACTATION

Safety in pregnancy and lactation has not been established.

DOSAGE AND DIRECTIONS FOR USE

Fresenius Glycopyrrolate Injection may be administered intramuscularly, intravenously or subcutaneously, without dilution, in the following indications:

Adults:

Pre-anaesthetic dose:

4 μg (0,02 ml) per kg body mass given by intramuscular injection, 30 minutes to one hour before induction of anaesthesia. Maximum dose is 400 μg.

Intraoperative dose:

100 μg (0,5 ml) given intravenously as a single dose, and repeated as needed at intervals of 2 – 3 minutes.

To reverse neuromuscular blockade:

200 μg (1 ml) IV for each 1 mg neostigmine or for each 5 mg pyridostigmine.

Children up to 12 years of age:

Pre-anaesthetic dose:

4 μg (0,02 ml/kg) given by intravenous or intramuscular injection. Maximum dose is 200 μg.

For intraoperative use:

Similar dose as the pre-anaesthetic dose above may be given during operation if required.

For reversal of neuromuscular blockade:

10μg/kg IV with neostigmine 50 μg/kg IV [200 μg (1 ml) IV for each 1 mg neostigmine or for each

5 mg pyridostigmine].

Fresenius Glycopyrrolate Injection can be mixed and injected with the following: 5 % and 10 % glucose in water or saline; pethidine injection; morphine sulphate; fentanyl plus droperidol injection; hydroxyzine injection. It can also be administered through tubing of an infusion of 0,9 % Sodium chloride or lactated Ringer's solution.

Chemical incompatibilities exist with sodium bicarbonate, diazepam, sodium phenobarbital, various phenothiazines, dimenhydrinate and chloramphenicol.

SIDE EFFECTS

Psychiatric disorders

Frequency unknown: mental confusion.

Nervous system disorders

Frequency unknown: headache, nervousness, drowsiness, insomnia, dizziness.

Eye disorders

Frequency unknown: dilation of pupils (mydriasis), loss of accommodation (cycloplegia), photophobia.

Cardiac disorders

Frequency unknown: transient bradycardia followed by tachycardia, palpitations and dysrhythmias.

Respiratory, thoracic and mediastinal disorders

Frequency unknown: decreased bronchial secretions.

Gastrointestinal disorders

Frequency unknown: dry mouth with difficulty swallowing and talking, thirst, decreased tone and motility of the gastrointestinal tract leading to constipation, nausea and vomiting.

Skin and subcutaneous tissue disorders

Frequency unknown: flushing and dryness of the skin.

Renal and urinary disorders

Frequency unknown: difficulty in micturition.

Reproductive system and breast disorders

Frequency unknown: impotence and suppression of lactation.

General disorders and administrative site conditions

Frequency unknown: weakness.

KNOWN SYMPTOMS OF OVERDOSAGE AND PARTICULARS OF ITS TREATMENT

In overdose, symptoms such as hyperthermia, hypertension, increased respiratory rate, nausea and vomiting may occur. A rash may appear on the face or upper trunk.

Neostigmine methylsulphate may be administered at a dose of 1,0 mg for each 1,0 mg of Fresenius Glycopyrrolate Injection that has been administered.

Treatment is symptomatic and supportive.

IDENTIFICATION

A clear, colourless solution in 1 ml or 2 ml clear glass ampoules.

PRESENTATION

1 ml or 2 ml clear glass ampoules in boxes of 10.

STORAGE INSTRUCTIONS

Store at or below 25 °C

Keep out of reach of children

REGISTRATION NUMBER

Fresenius Glycopyrrolate Injection 0,2 mg/1 ml: A40/5.4/0101

Fresenius Glycopyrrolate Injection 0,4 mg/2 ml: A40/5.4/0044

NAME AND BUSINESS ADDRESS OF THE HOLDER OF THE CERTIFICATE OF REGISTRATION

Fresenius Kabi Manufacturing SA (Pty) Ltd

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DATE OF PUBLICATION OF THE PACKAGE INSERT

Date of registration and date of last approval: 19 April 2013

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