SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Chlorphenamine 10mg/ml Solution for Injection

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 1 ml of solution contains: Chlorphenamine Maleate 10mg.

Excipient with known effect:

Each ml of solution contains 0.14 mmol (3.15 mg) of sodium.

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Solution for injection.

Clear, colourless, sterile solution for injection.

The pH of the solution is 4.0 – 5.2 and the osmolality is 270 – 320 mOsm/kg.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Chlorphenamine injection is indicated for acute urticaria, control of allergic reactions to insect bites and stings, angioneurotic oedema, drug and serum reactions, desensitisation reactions, hayfever, vasomotor rhinitis, severe pruritus of non-specific origin.

4.2 Posology and method of administration

Adults:

The usual dose of chlorphenamine injection for adults is 10mg to 20mg, but not more than 40mg should be given within a 24-hour period. The injection may be given by the subcutaneous, intramuscular or intravenous route.

When a rapid effect is desired, as in anaphylactic reactions, the intravenous route is recommended in addition to emergency therapy with adrenaline (epinephrine),

corticosteroids, oxygen and supportive therapy as required. In this case chlorphenamine injection should be injected slowly over a period of one minute, using the smallest adequate syringe. Any drowsiness, giddiness or hypotension which may follow is usually transitory.
In the event of a blood transfusion reaction, a dose of 10mg to 20mg of chlorphenamine injection should be given by the subcutaneous route. This can be repeated to a total of 40mg within a 24-hour period, or oral forms of chlorphenamine may be given until the symptoms subside.
Chlorphenamine injection may be helpful in the prevention of delayed reactions to penicillin and other drugs when given separately by intramuscular injection immediately prior to administration of the other drug. The usual dose is 10mg. Chlorphenamine injection cannot, however, be relied on to prevent anaphylactic reactions in patients known to be allergic to a particular drug.
Children:
The dose for children should be calculated, based on either the child's age or their body weight, using the following table:

Age	**Dose**		
1 month to 1 year			0.25mg/kg
1 to 5 years	2.5mg to 5mg	OR	0.20mg/kg
6 to 12 years	5mg to 10mg	OR	0.20mg/kg
12 to 18 years	10mg to 20mg	OR	0.20mg/kg

Extra care should be taken when preparing the injection for children under 1 year due to the small volumes that are required. Dilution of chlorphenamine injection with sodium chloride intravenous infusion (0.9% w/v) should facilitate preparation. For example, diluting 0.2ml chlorphenamine injection to 2ml with sodium chloride 0.9% injection produces a solution containing chlorphenamine 1mg/ml. The diluted product should be used immediately.

4.3 Contraindications

Chlorphenamine injection is contraindicated in patients who are hypersensitive to antihistamines or to any of the other ingredients.

The anticholinergic properties of chlorphenamine are intensified by monoamine oxidase inhibitors (MAOIs). Chlorphenamine injection is therefore contraindicated in patients who have been treated with MAOIs within the last fourteen days.

4.4 Special warnings and precautions for use

Chlorphenamine, in common with other drugs having anticholinergic effects, should be used with caution in epilepsy; raised intra-ocular pressure including glaucoma; prostatic hypertrophy; severe hypertension or cardiovascular disease; bronchitis; bronchiectasis and asthma; hepatic disease and thyrotoxicosis. Children and the elderly are more likely to experience the neurological anticholinergic effects.
This medicinal product contains less than 1 mmol sodium (23 mg) per dose of up to 4 ml, i.e. it is essentially 'sodium-free'.

4.5 Interaction with other medicinal products and other forms of interaction

Concurrent use of chlorphenamine and hypnotics or anxiolytics may potentiate drowsiness. Concurrent use of alcohol may have a similar effect.

Chlorphenamine inhibits phenytoin metabolism and can lead to phenytoin toxicity.

The anticholinergic effects of chlorphenamine are intensified by MAOIs (see section 4.3 Contraindications).

4.6 Fertility, Pregnancy and lactation

Pregnancy:

There is inadequate evidence of safety in human pregnancy. Chlorphenamine injection should only be used during pregnancy when clearly needed and when the potential benefits outweigh the potential unknown risks to the foetus. Use during the third trimester may result in reactions in neonates.

Breast-feeding:

It is reasonable to assume that chlorphenamine may inhibit lactation and may be secreted in breast milk. The use of chlorphenamine injection in mothers breast-feeding their babies requires that the therapeutic benefits of the drug should be weighed against the potential hazards to the mother and baby.

Fertility:

No data are available.

4.7 Effects on ability to drive and use machines

The anticholinergic properties of chlorphenamine may cause drowsiness, blurred vision and psychomotor impairment, which can seriously hamper the patient’s ability to drive and use machinery.

4.8 Undesirable effects

The most common side-effect is sedation varying from slight drowsiness to deep sleep. The following may also occasionally occur: inability to concentrate; lassitude; blurred vision; gastro-intestinal disturbances such as nausea, vomiting and diarrhoea.

Urinary retention; headaches; dry mouth; dizziness; palpitation; painful dyspepsia; anorexia; hepatitis including jaundice; thickening of bronchial secretions; haemolytic anaemia and other blood dyscrasias; allergic reactions including exfoliative dermatitis,

photosensitivity, skin reactions and urticaria; twitching, muscular weakness and incoordination; tinnitus; depression; irritability and nightmares infrequently occur.

Paradoxical excitation in children and confusional psychosis in the elderly can occur.

Some patients have reported a stinging or burning sensation at the site of injection. Rapid intravenous injection can cause temporary dizziness.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard.

4.9 Overdose

The estimated lethal dose of chlorphenamine is 25mg to 50mg/kg body weight. Symptoms and signs include sedation, paradoxical stimulation of the CNS, toxic psychosis, seizures, apnoea, convulsions, anticholinergic effects, dystonic reactions and cardiovascular collapse including arrhythmias.

Symptomatic and supportive measures should be provided with special attention to cardiac, respiratory, renal and hepatic functions, and fluid and electrolytic balance. If overdosage is by the oral route, treatment should include gastric lavage or induced emesis using syrup of ipecacuanha. Following these measures activated charcoal and cathartics may be administered to minimise absorption.

Treat hypotension and arrhythmias vigorously. CNS convulsions may be treated with iv diazepam. Haemoperfusion may be used in severe cases.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Antihistamines for systemic use

ATC code: R06AB04

Antihistamines, including chlorphenamine, used in the treatment of allergy act

by competing with histamine for H1-receptor sites on cells and tissues. Chlorphenamine also has anticholinergic activity.

The mechanism by which chlorphenamine exerts its anti-emetic, anti-motion sickness and anti-vertigo effects is not precisely known but may be related to its central actions. Further, most antihistamines, including chlorphenamine, cross the blood-brain barrier and probably produce sedation largely by occupying H1-receptors in the brain.

5.2 Pharmacokinetic properties

Following iv administration, the apparent steady-state volume of distribution of chlorphenamine is approximately 3L/kg in adults and 3.8L/kg in children.

Chlorphenamine is approximately 70% bound to plasma proteins.

In adults with normal renal and hepatic function, the terminal elimination half-life of chlorphenamine reportedly ranges from 12 to 43 hours.

The systemic exposure per mg dose is lower in children than adults and the elimination half-life may be shorter.

5.3 Preclinical safety data

There are no pre-clinical data of relevance to the prescriber which are additional to that already included in other sections of the Summary of Product Characteristics.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium chloride

Water for injections

Hydrochloric acid (pH adjuster)

Sodium hydroxide (pH adjuster).

6.2 Incompatibilities

In the absence of compatibility studies, this product must not be mixed with other medicinal products.

6.3 Shelf life

3 years.

Shelf life after first opening: use immediately.

Shelf life after dilution: use immediately.

6.4 Special precautions for storage

Do not store above 25°C.

Keep the container in the outer carton in order to protect from light.

6.5 Nature and contents of container

Chlorphenamine injection is presented in 2ml neutral glass ampoules, each containing 1ml of solution. It is supplied in boxes of 5 ampoules.

6.6 Special precautions for disposal

Use in the paediatric population:

Due to the small volumes that are required for children under one year of age, chlorphenamine injection may be diluted with sodium chloride 0.9% injection to produce a solution containing chlorphenamine 1mg/ml. For example, 0.2ml chlorphenamine injection may be diluted to 2ml with sodium chloride 0.9% injection immediately prior to administration. See section 4.2 for details of paediatric dosing.

The diluted solution should be inspected visually for particulate matter and discoloration prior to administration. In the event of either being observed, discard the medicinal product. Only clear solution should be used. See section 6.3 for details regarding the shelf-life of the diluted solution.

This medicinal product is for single use only.

If the entire reconstituted content of the ampoule is not required, any unused solution should be discarded in accordance with local requirements.

7 MARKETING AUTHORISATION HOLDER

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8 MARKETING AUTHORISATION NUMBER(S)

PL 01883/0348

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