

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

MIPHTEL 20mg powder and solvent for solution for intraocular irrigation.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each powder ampoule contains 20mg acetylcholine chloride. 2ml of the reconstituted solution contain 20mg of acetylcholine chloride. Each ml of the reconstituted solution provides 10mg of acetylcholine chloride. For full list of excipients, see section 6.1

3. PHARMACEUTICAL FORM

Powder and solvent for solution for intraocular irrigation.
The lyophilised powder is white. The solvent is a clear, colourless liquid.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

To obtain rapid and complete miosis after delivery of the lens in cataract surgery as well as in penetrating keratoplasty, iridectomy and other anterior segment surgery where rapid complete miosis is required.

4.2 Posology and method of administration

MIPHTEL is for intraocular use.

The lyophilised powder should be reconstituted with the solvent just before use as described in section 6.6. The reconstituted solution should be clear and colourless.

The reconstituted solution should be slowly withdrawn from the ampoule into a suitable sterile syringe and should be administered into the anterior chamber of the eye during surgery.

In cataract surgery, acetylcholine should be used only after delivery of the lens.

Following surgery, if miosis is necessary, it must be maintained by longer acting topical miotics such as pilocarpine or physostigmine.

Adults and Elderly

In most cases a satisfactory miosis, which will last for approximately 20 minutes, is produced in seconds by 0.5-2.0ml. A second application may be made at the discretion of the surgeon if prolonged miosis is required.

Children

Safety and effectiveness in children has not been established.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients.

4.4 Special warnings and precautions for use

Acetylcholine for intraocular use should be used with caution in patients suffering from bronchial asthma, heart failure, hyperthyroidism, gastrointestinal spasm, peptic ulcer, urinary tract obstruction, parkinsonism.

Miosis will occur to a lesser extent in acute angle-closure glaucoma or in eyes which demonstrate posterior synechiae or atrophy of the iris. For rapid and complete miosis with acetylcholine, obstructions such as synechiae may require surgery.

Following lens extraction, the rapid miosis produced by acetylcholine protects the vitreous face and facilitates the placement of corneal sutures by reducing the hazard of incarceration of its iris tissue during the closure of the wound.

Following iridectomy, the traction produced by acetylcholine upon the released iris helps to reposit it towards its original position within the anterior chamber and in this taut condition there is less danger of its prolapse.

Following surgery, miosis must be augmented by longer acting topical miotics such as pilocarpine or physostigmine.

4.5 Interaction with other medicinal products and other forms of interaction

Although clinical studies with acetylcholine chloride and animal studies with acetylcholine revealed no interference, and there is no known pharmacological basis for an interaction, there have been reports that acetylcholine has been ineffective when used in patients treated with topical non-steroidal anti-inflammatory agents.

Use of MIPHTEL in patients receiving β -blockers may result in bronchospasm.

4.6 Pregnancy and lactation

The potential risk for humans is unknown (see also section 5.3).

MIPHTEL should not be used during pregnancy and lactation unless clearly necessary.

4.7 Effects on ability to drive and use machines

No studies on the effects on the ability to drive and use machines have been performed.

However, the surgical procedure may impair vision. Patients should not drive or use machines until such disturbances have subsided.

4.8 Undesirable effects

Adverse reactions which are indicative of systemic absorption have been reported rarely in the literature. Symptoms include bradycardia, hypotension, flushing, breathing difficulties and sweating. Isolated cases of corneal oedema, corneal clouding and corneal decompensation have been reported with the use of acetylcholine 1% solutions although a causal relationship has not been established.

4.9 Overdose

The symptoms of overdosage are likely to be effects resulting from systemic absorption, ie bradycardia, hypotension, flushing, breathing difficulties and sweating. Atropine sulphate (0.5-1mg) should be given intramuscularly or intravenously and should be readily available to counteract possible overdosage. Adrenaline (0.1–1mg subcutaneously) is also of value in overcoming severe cardiovascular or bronchoconstrictor responses.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Antiglaucoma preparations and miotics, parasympathomimetics.

ATC code: S01EB09

Acetylcholine is a physiological neuromediator of postganglionic parasympathetic nerve fibres (muscarinic action), skeletal muscles and ganglia of the sympathetic system (nicotinic action).

The ocular parasympathetic receptors of the muscarinic type are very numerous and localised:

- at the level of the pupillary sphincter, whose contraction causes miosis;
- at the level of the ciliary muscle, whose contraction allows accommodation and facilitates the flow of the aqueous humor by opening of the trabecular meshwork. In addition, the acetylcholine can have an inhibitory effect on the aqueous secretion. These two last factors result in a decrease in the intraocular pressure;
- at the level of the lacrimal glands, whose stimulation causes tearing.

5.2 Pharmacokinetic properties

After topical instillation to the eye acetylcholine is almost immediately destroyed by cholinesterases. The bioavailability of ophtalmic acetylcholine solutions is poor: corneal penetration using topical application is not effective. The product must be administered via instillation into the anterior chamber of the eye. Following instillation of a 1% solution of acetylcholine chloride into the anterior chamber of the eye, miosis occurs promptly and persists for approximately 10–20 minutes.

5.3 Preclinical safety data

Preclinical data reveal no special hazard for humans. Animal studies are insufficient with respect to effects on pregnancy, embryonal/foetal development, parturition or postnatal development.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipient(s)

Powder: Mannitol (E 421), Sodium Hydroxide (E 524)

Solvent: Water for injections

6.2 Incompatibilities

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

Acetylcholine is incompatible with solutions of acidic or alkaline pH but this is unlikely to be relevant during clinical use.

6.3 Shelf-life

Unopened powder ampoule: 2 years.

Shelf-life after reconstitution: 30 minutes.

6.4 Special precautions for storage

Do not freeze.

Store in the original package.

6.5 Nature and contents of container

Type I colourless glass ampoule.

Each pack contains 6 powder ampoules and 6 solvent ampoules.

6.6 Special precautions for disposal and other handling

The reconstituted solution should be clear and colourless.

Warning: Do not use if the PVC holder or peelable backing is damaged or broken.

Directions for preparing MIPHTEL

1. Inspect unopened PVC holder to ensure that it is intact. Peel open the holder.
2. Aseptically withdraw the entire content of the solvent ampoule into a sterile syringe.
Discard ampoule.
3. Transfer the solvent from the syringe to the powder ampoule.
4. Shake gently to dissolve drug.
5. Visually inspect the reconstituted solution for particulate matter. Do not use solutions containing particulate matter.

The reconstituted solution should be slowly withdrawn from the ampoule into a suitable sterile syringe and should be administered into the anterior chamber of the eye.

The product provides 10mg/ml of acetylcholine chloride when diluted as recommended.

In most cases a satisfactory miosis, which will last approximately 20 minutes, is produced within seconds by 0.5–2ml of reconstituted solution. If a prolonged miosis is required a second application may be made.

The solution must be prepared just before use, since aqueous solutions of acetylcholine are unstable. Only clear and colourless solutions should be used.

The product is sterile until opened and should not be re-sterilised.

For single use only. Any unused solution should be discarded.

7. MARKETING AUTHORISATION HOLDER

Farmigea S.p.A., Via G.B. Oliva 8, I-56121 Pisa, Italy

8. MARKETING AUTHORISATION NUMBER(S)

PL 24653/0001

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

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10. DATE OF REVISION OF THE TEXT

13/03/2024