SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Fenylefrin Abcur 0.05 mg/ml, solution for injection
Fenylefrin Abcur 0.1 mg/ml, solution for injection

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml solution for injection contains phenylephrine hydrochloride corresponding to 0.05 mg phenylephrine.
1 ampoule of 10 ml contains phenylephrine hydrochloride corresponding to 0.5 mg phenylephrine.

Each ml solution for injection contains phenylephrine hydrochloride corresponding to 0.1 mg phenylephrine.
1 ampoule of 5 ml contains phenylephrine hydrochloride corresponding to 0.5 mg phenylephrine.
1 ampoule of 10 ml contains phenylephrine hydrochloride corresponding to 1.0 mg phenylephrine.
1 ampoule of 20 ml contains phenylephrine hydrochloride corresponding to 2.0 mg phenylephrine.
1 vial of 50 ml contains phenylephrine hydrochloride corresponding to 5.0 mg phenylephrine.

Excipients with known effect:
1 vial of 50 ml contains 8 mmol (185 mg) sodium.
1 ampoule of 20 m contains 3.2 mmol (74 mg) sodium.
1 ampoule of 10 ml contains 1.6 mmol (37 mg) sodium.
1 ampoule of 5 ml contains 0.8 mmol (18.5 mg) sodium.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.

Appearance: Clear colourless solution.
pH: 4.5 – 6.5
Osomolality: 280 – 320 mOsm/kg

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Treatment of hypotension during general anaesthesia.

4.2 Posology and method of administration

Posology

Adults
Bolus intravenous injection:
The usual dose is 50 micrograms, which can be repeated until the desired effect is achieved. In case of severe hypotension, doses can be increased, without exceeding 100 micrograms in a bolus dose.

Continuous intravenous infusion:

The initial dose is 25 to 50 microgram/min. Doses can be increased or decreased to maintain systolic blood pressure near baseline values. Doses between 25 and 100 microgram/min have been considered effective.

Renal impairment:
Lower doses of phenylephrine might be required in patients with renal impairment.

Hepatic impairment:
Higher doses of phenylephrine might be required in liver cirrhosis patients.

Elderly:
Treatment in elderly should be performed with caution.

Paediatric population
The safety and efficacy of phenylephrine in children has not been established. No data are available.

Method of administration

Parenteral administration. Bolus intravenous injection or intravenous infusion.

Fenylefrin Abcur should only be administered by healthcare professionals with adequate training and experience relevant for the safe usage of phenylephrine.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

Phenylephrine should not be used in patients with severe hypertension or peripheral vascular disease . This could lead to ischemia with risks of gangrene or vascular thrombosis.

Phenylephrine should not be used in patients with severe hyperthyroidism.

In combination with indirect sympathomimetics (ephedrine, methylphenidate, pseudoephedrine): Risk of vasoconstriction and/or hypertensive crisis.

In combination with alpha sympathomimetics (oral and/or nasal use) (etilefrine, midodrine, naphazoline, oxymetazoline, synephrine, tetryzoline, tuaminoheptane, tymazoline): Risk of vasoconstriction and/or hypertensive crisis.

In combination with non-selective monoaminoxidase (MAO) inhibitors or within 2 weeks after their discontinuation: Risk of hypertensive crisis or potentially fatal hyperthermia (see section 4.5).

4.4 Special warnings and precautions for use

Arterial blood pressure should be monitored during treatment.

Phenylephrine should be administered with caution in patients with:
- diabetes,
- arterial hypertension,
- uncontrolled hyperthyroidism,
- coronary artery disease and chronic cardiac disorders,
- bradycardia,
- partial heart block

Phenylephrine may induce a decrease in cardiac output. Consequently, it should be administered with extreme caution in patients with atherosclerosis, in the elderly and in patients with compromised cerebral or coronary circulation.

In patients with severe heart failure or cardiogenic shock, phenylephrine may cause a worsening of heart failure as a result of the vasoconstriction induced (increase in after-load).

Frequent monitoring of vital signs and lower systemic blood pressure criteria for reversing or discontinuing phenylephrine should be considered in patients with medical conditions such as decreased cardiac output or peripheral vascular disease.

Lower doses might be required in patients with renal impairment.

Higher doses of phenylephrine might be required in liver cirrhosis patients.

Administration of this medicinal product with the following products is not advisable because of the risk of vasoconstriction and/or hypertensive crisis associated with its indirect sympathomimetic activity; (see section 4.5.).

- dopaminergic ergot alkaloids (bromocriptine, cabergoline, lisuride or pergolide) or vasoconstrictors (dihydroergotamine, ergotamine, methylergometrine or methysergide)
- in combination with linezolide

Phenylephrine is not recommended in subjects with a shallow anterior chamber or a history of acute narrow angle glaucoma

- Use of Fenylefrin Abcur in patients with shallow anterior chamber, a history of acute narrow angle glaucoma and/or insufficient pupil dilation can increase the risk of both iridocele and floppy iris syndrome.

Excipient

1 vial of 50 ml contains 185 mg sodium, equivalent to 9.3% of the WHO recommended maximum daily intake of 2 g sodium for an adult.

1 ampoule of 20 ml contains 74 mg sodium, equivalent to 3.7% of the WHO recommended maximum daily intake of 2 g sodium for an adult.

1 ampoule of 10 ml contains 37 mg sodium, equivalent to 1.9% of the WHO recommended maximum daily intake of 2 g sodium for an adult.

1 ampoule of 5 ml contains less than 1 mmol sodium (23 mg), that is to say essentially ‘sodium-free’.

4.5 Interaction with other medicinal products and other forms of interaction

Combinations which are contra-indicated (see section 4.3)
Indirect sympathomimetics (ephedrine, methylphenidate, pseudoephedrine): Risk of vasoconstriction and/or hypertensive crisis.

Alpha sympathomimetics (oral and/or nasal use) (etilefrine, midodrine, naphazoline, oxymetazoline, synephrine, tetryzoline, tuaminoheptane, tymazoline): Risk of vasoconstriction and/or hypertensive crisis.

Non-selective monoamine oxidase inhibitors (MAOs) (iproniazid, nialamide): Paroxysmal hypertension, hyperthermia possibly fatal. Due to the long duration of action of MAOIs, this interaction is still possible 15 days after discontinuation of the MAOI.

Combinations which are not advisable (see section 4.4)
Dopaminergic ergot alkaloids (bromocriptine, cabergoline, lisuride, pergolide): Risk of of vasoconstriction and/or hypertensive crisis.

Vasoconstrictor ergot alkaloids (dihydroergotamine, ergotamine, methylergometrine, methysergide): Risk of vasoconstriction and/or hypertensive crisis.

Linezolide: Risk of vasoconstriction and/or hypertensive crisis.

Combinations requiring precautions for use
Selective (moclobemid, toloxatone) MAO inhibitors: Risk for an increased duration of effect of phenylephrine cannot be excluded.

4.6 Fertility, pregnancy and lactation

Pregnancy
There are no adequate data from the use of Fenylefrin Abcur in pregnant women. Animal studies are insufficient with respect to effects on pregnancy, embryonal/fetal development, parturition and postnatal development. The potential risk for humans is unknown.
Phenylephrine should not be used during pregnancy unless clearly necessary.

Breast-feeding
Small amounts of phenylephrine are excreted in breast milk.

Administration of vasoconstrictors to the mother exposes the infant to a risk of cardiovascular and neurological effects. Phenylephrine Abcur should not be used during lactation unless the potential benefit outweighs the potential risk.

Fertility
There are no data available on fertility following exposure to phenylephrine (see section 5.3).

4.7 Effects on ability to drive and use machines

Treatment with this medicinal product is not compatible with driving or using machines.

4.8 Undesirable effects

For this medicinal product there is no modern clinical documentation which can act as base for assessment of the frequency of the undesirable effects. Most undesired effects of phenylephrine are dose dependent and a consequence of the expected pharmacodynamic profile.

Psychiatric disorders:
Excitability, agitation

Nervous system disorders:
Headache

Cardiac disorders:
Reflex bradycardia, arrhythmia, anginal pain

Vascular disorders
Hypertension

Extravasation of Fenylefrin Abcur may cause tissue necrosis. Phentolamine should be used to reverse the ischemia secondary to any alpha agonist.

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 national reporting system listed in Appendix V*.

4.9 Overdose

An overdose can cause premature ventricular contraction and short paroxysmal episodes of ventricular tachycardia. When a significant increase in blood pressure occurs, reflex bradycardia can be expected.

An overdose of pheylephrine may cause hypertensive crises.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Cardiac stimulants excluding cardiac glycosides, ATC code: C01C A06

Phenylephrine is a potent vasoconstrictor which acts almost totally by stimulation of alpha 1 adrenergic receptors. Such arterial vasoconstriction is also accompanied by venous vasoconstriction. It produces an increase in blood pressure, and reflex bradycardia.The potent arterial vasoconstriction produces an increase in resistance to ventricular ejection (increase in after load), resulting in a decrease in cardiac output, which is little pronounced in healthy subjects but can produce a worsening in case of pre-existing heart failure.

5.2 Pharmacokinetic properties

Distribution
The duration of action is 20 minutes after intravenous administration.

The volume of distribution after single dose is 340 litres.

The plasma protein binding is unknown.

Elimination
Phenylephrine is excreted mainly by the kidney as m-hydroxymandelic acid and phenol conjugates.

The elimination half-life is approximately 2-3 hours.

There are no data available on the pharmacokinetics of phenylephrine in special populations.

5.3 Preclinical safety data

There are no preclinical data considered relevant to clinical safety beyond data included in other sections of the SPC.

There are no preclinical data available on fertility or reproductive effects following exposure to phenylephrine.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium chloride, sodium citrate, citric acid and water for injections.

6.2 Incompatibilities

Phenylephrine is incompatible with alkaline solutions, iron salts and other metals.

6.3 Shelf life

3 years

6.4 Special precautions for storage

This medicinal product does not require any special storage conditions

6.5 Nature and contents of container

Fenylefrin Abcur 0.05 mg/ml: 10 ml glass ampoules in boxes of 5, 10, 20, 50 or 100 ampoules.

Fenylefrin Abcur 0.1 mg/ml: 5 ml, 10 ml or 20 ml glass ampoules in boxes of 5, 10, 20, 50 or 100 ampoules. 50 ml glass vials in boxes of 1, 12, 24 or 48 vials.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

No special requirements

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Abcur AB
Box 1452
251 14 Helsingborg

8. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

[To be completed nationally]

10. DATE OF REVISION OF THE TEXT

2023-04-27