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SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Ardeaelytosol F 1/2 4,5 g/l + 25 g/l infusion solution
Ardeaelytosol F 1/3 3 g/l + 33,33 g/l infusion solution

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Ardeaelytosol	**F 1/2**	**F 1/3**
1000 ml of infusion solution contains:		
Natrii chloridum	4.50 g	3.00 g
Glucosum (as either glucosum or glucosum monohydricum)	25.00 g	33.33 g
Electrolyte content:		
Na^+ [mmol/l]	77.0	51.3
Cl^- [mmol/l]	77.0	51.3
Glucose ($C_6H_{12}O_6$) [mmol/l]	138.8	185.0
pH	3.5-6.0	3.5-6.0
Osmotic pressure [kPa]	675.0	677.0
Energy value [kJ/l]	429.0	572.0

For the full list of excipients, see the section 6.1.

3. PHARMACEUTICAL FORM

Infusion solution
Description of the product: clear, colorless or slightly yellowish solution

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

It is used for replacing water in dehydration, especially in cases of water losses higher than electrolytes losses – hypertonic dehydration. A carrying solution for other drugs.

4.2. Posology and method of administration

The dosage is individual, guided by the indication and the patient's condition. Dosage rate is about 4-8 ml/kg/hour. The product is intended for adults or children without any age restriction.

Method of administration:
Intravenous drop infusion in the closed system

4.3. Contraindications

Acidosis, hypotonic dehydration, hyperglycaemia.

Hypotonic overhydration, renal failure (oliguria, anuria), decompensated cardiac insufficiency, pulmonary and cerebral oedema, a major stage of hypertension.

4.4. Special warnings and precautions for use

Fluid balance, serum glucose, serum sodium and other serum electrolytes are necessary to be monitored before and during administration, especially in patients with increased non-osmotic

vasopressin release (syndrome of inappropriate antidiuretic hormone secretion, SIADH) and in patients co-medicated with vasopressin agonist drugs due to the risk of hyponatremia.

Intravenous glucose infusion solutions are usually isotonic solutions. Nevertheless, solutions containing glucose become extremely hypotonic in the body due to rapid glucose metabolization (see sections 4.2, 4.5 and 4.8).

In physiologically hypotonic solutions, serum sodium monitoring is especially important.

Hyponatremia:

Acute hyponatremia can lead to acute hyponatremic encephalopathy (cerebral oedema).

Children, women in the fertile age and patients with reduced cerebral compliance (e.g. meningitis, intracranial bleeding and cerebral contusion) are at increased risk of the severe and life-threatening brain swelling caused by acute hyponatremia.

Particular caution should be exercised in the administration of Ardeaelytosol F 1/2 (F 1/3) in elderly patients treated also with other products.

It is necessary to maintain an adequate infusion flow rate.

4.5. Interaction with other medicinal products and other forms of interaction

Drugs leading to an increased vasopressin effect

The below listed drugs increase the vasopressin effect, leading to reduced renal electrolyte free water excretion and an increased risk of hyponatremia following inappropriately balanced treatment with i.v. solutions (see sections 4.2, 4.4 and 4.8).

- Drugs stimulating vasopressin release include:
  chlorpropamide, clofibrate, carbamazepine, vincristine, selective serotonin reuptake inhibitors, 3,4-methylenedioxy-N-methamphetamine, ifosfamide, antipsychotics, narcotics.
- Drugs potentiating vasopressin action include:
  chlorpropamide, NSAIDs, cyclophosphamide.
- Vasopressin analogues include:
  desmopressin, oxytocin, vasopressin, terlipressin.

Other medicinal products increasing the risk of hyponatremia also include diuretics in general and antiepileptics such as oxcarbazepine.

4.6. Fertility, pregnancy and lactation

The medicinal product of Ardeaelytosol F 1/2 (F 1/3) should be administrated with special caution in pregnant women during labour, particularly if administered in combination with oxytocin, because of the risk of hyponatremia (see sections 4.4, 4.5 and 4.8).

4.7. Effects on ability to drive and use machines

The product of Ardeaelytosol F 1/2 (F 1/3) is administered only in medical facilities and that is why the assessment of its impact on ability to drive or use machines is not relevant.

4.8. Undesirable effects

No direct undesirable effects are given with the product of Ardeaelytosol F 1/2 (F 1/3); there is a possibility of general undesirable effects connected with an unsuitable management of the infusion therapy.

Frequency of undesirable effects, as given below, is defined according to the following convention:

Very common (≥ 1/10); common (≥ 1/100, < 1/10); uncommon (≥ 1/1,000, < 1/100); rare (≥ 1/10,000, < 1/1,000); very rare (< 1/10,000); not known (cannot be established from the available data).

Organ system class according to MedDRA database	Character of undesirable effect	Frequency of occurrence
Blood and lymphatic system disorders	Ion balance breakdown	Not known
Cardiac disorders	Oedemas	Not known
	Cardiac failure	Not known
Renal and urinary disorders	Overhydration	Not known
Metabolism and nutrition disorders	Hyponatremia*	Not known
Nervous system disorders	Hyponatremic encephalopathy*	Not known

* Hyponatremia may cause irreversible brain injury and death due to development of acute hyponatremic encephalopathy (see sections 4.2 and 4.4).

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 to the address:

Státní ústav pro kontrolu léčiv (State Institute for Drug Control)
Šrobárova 48
100 41 Praha 10

Website: www.sukl.cz/nahlasit-nezadouci-ucinek

4.9. Overdose

If well-balanced water and ion balance is respected, then no overdose is to be taken into account. Inadequately managed infusion therapy can result in disorders of ionic balance, overhydration, hyponatremia, oedemas, cardiovascular decompensation. In such case the infusion should be interrupted, or else diuretics be administered.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Pharmacotherapeutic group: infundabilium, ATC code: B05BB02 (Intravenous solutions – solutions affecting the electrolyte balance – electrolytes with carbohydrates).

Basic infusion solution with reduced ions content.

It has a slight acidification effect after administration.

5.2. Pharmacokinetic properties

a) General information – no active metabolites are generated.

b) Characterization of the active substances – it is a simple inorganic salt (NaCl), which are the body natural ions, and glucose, a source of energy. They are water-soluble, fat-insoluble.

c) Characterization after the administration in patients – it is a product intended for intravenous use. It persists in the blood circulation only for a few tens of minutes after i.v. administration; it leaks into extravascular compartment easily. Sodium and chloride ions are distributed in the body according concentration gradients in extracellular fluid; free water is distributed according to concentration gradient in all compartments. Ionic balance is dependent on the excretion of individual ions by kidneys and is particularly subordinated to mineralocorticoids regulation.

Water homeostasis is regulated by antidiuretic hormone.

Glucose is a basic substrate of cellular energy metabolism. Glucose is evenly distributed in the body; glucose enter into cells is dependent on insulin action. Glucose goes through freely via glomerular filtration and is completely reabsorbed in tubules.

5.3. Preclinical safety data

It is a product with a long-term usage ("well implemented therapeutic use") in which no preclinical studies had been performed with its introduction into the therapy.

There have been no undesirable effects known from the literature. The product used according to the recommended method is entirely safe.

6. PHARMACEUTIAL PARTICULARS

6.1. List of excipients

Aqua pro iniectione

6.2. Incompatibilities

The product is compatible with most of medicines commonly used.

No physical or chemical incompatibilities are known except of those with solutions with oxidants content or solutions showing a different pH value.

6.3. Shelf life

2 years provided that the package is intact.

Chemical and physical stability before the use after the opening was confirmed for 48 hours at 25°C.

From microbiological point of view, the product should be used immediately. If it is not used immediately, then the period and storage conditions of the product after the opening before the use are within the reliability of the user and in common case it should not be longer than 24 hours at 2-8 °C as far as the opening was not performed under the controlled and validated aseptic conditions.

6.4. Special precautions for storage

Protect from frost.

6.5. Nature and contents of container

Infusion glass bottle with a rubber stopper and a metallic closure, carton box.

Package size: 1x 80 ml, 1x 100 ml, 1x 250 ml, 1x 500 ml

20x 80 ml, 20x 100 ml, 10x 250 ml, 10x 500 ml

Not all package sizes may be marketed.

6.6. Special precautions for use, disposal and other handling

This medicinal product is dispensed entirely on the base of medical prescription.

It is usually administered by an infusion set into peripheral vein.

Parenteral products should be checked up visually before the use. The product must not be administered if visible solid particles are present or the package is not intact.

The preparation is intended only for a single use.

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

7. MARKETING AUTHORISATION HOLDER

ARDEAPHARMA, a.s., Třeboňská 229, 373 63 Ševětín, Česká republika (Czech Republic)

8. MARKETING AUTHORISATION NUMBER(S)

Ardeaelytosol F 1/2: 76/755/95-A/C

Ardeaelytosol F 1/3: 76/755/95-B/C

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of the first authorization: 11th October1995
Date of the last renewal of the authorization: 19th October 2016

10. DATE OF REVISION OF THE TEXT

13th April 2018