PACKAGE INSERT FOR ALBUMIN HUMAN 20 % OCTAPHARMA®

Scheduling status **S4**

Proprietary name (and dosage form)

ALBUMIN HUMAN 20 % OCTAPHARMA® (Solution for Intravenous Infusion)

Composition

ALBUMIN HUMAN 20 % OCTAPHARMA® is manufactured from freshly frozen human venous plasma complying with the European Pharmacopoeia for Human Plasma for Fractionation.

ALBUMIN HUMAN 20 % OCTAPHARMA® contains per 1 000 ml solution:

Human albumin	200 g (20 %) (200 mg plasma protein per ml solution of which at least 96 % is human albumin)
Sodium	144 to 160 mmol
Potassium	≤ 10 mmol
N-acetyl-DL-tryptophan	12,8 to 19,2 mmol
Caprylic acid	12,8 to 19,2 mmol
Water for Injections	to 1 000 ml
The limit for Aluminium	not more than 200 µg/l

ALBUMIN HUMAN 20 % OCTAPHARMA® contains no antimicrobial agent or preservative.

The pH of the solution is between 6,7 and 7,3.

Pharmacological classification

A 30.3 Biologicals (Blood fractions)

Pharmacological action

Human albumin is a normal constituent of human plasma and acts like physiological albumin.

Pharmacodynamic properties

Pharmacotherapeutic group: plasma substitutes and plasma protein fractions, ATC code: B05AA01.

Human albumin accounts quantitatively for more than half of the total protein in the plasma and represents about 10 % of the protein synthesis activity of the liver.

Physiochemical data

Human albumin 20 % has a corresponding hyperoncotic effect.

The most important physiological function of albumin results from its contribution to oncotic pressure of the blood and transport function. Albumin stabilises circulating blood volume and is a carrier of hormones, enzymes, medicinal products and toxins.

Pharmacokinetic properties

Under normal conditions the total exchangeable albumin concentration is 4 to 5 g/kg body mass, of which 40 to 45 % is present intravascularly and 55 to 60 % in the extravascular space. Increased capillary permeability will alter albumin kinetics and abnormal distribution may occur in conditions such as severe burns or septic shock.

Under normal conditions the half-life of albumin is on average about 18 to 19 days. The balance between synthesis and breakdown is normally achieved by feed-back regulation. Elimination is predominantly intracellular and due to lysosome proteases.

In healthy subjects, less than 10 % of infused albumin leaves the intravascular compartment during the first 2 hours following infusion. There is considerable individual variation in the effect on plasma volume. In some patients the plasma volume can remain increased for some hours. However, in critically ill patients, albumin can leak out of the vascular space in substantial amounts

at an unpredictable rate.

Indications

ALBUMIN HUMAN 20 % OCTAPHARMA® is indicated for restoration and maintenance of circulating blood volume where volume deficiency has been demonstrated and use of a colloid is appropriate.

The choice of albumin rather than artificial colloid will depend on the clinical situation of the individual patient, based on official recommendations.

Contra-indications

Hypersensitivity to albumin preparations including **ALBUMIN HUMAN 20 % OCTAPHARMA®** or to any of the excipients.

Warnings and Special Precautions

If allergic or anaphylactic-type reactions occur, the infusion should be stopped immediately and appropriate treatment instituted. In case of shock, the current medical standards for shock treatment should be observed.

Special precautions

ALBUMIN HUMAN 20 % OCTAPHARMA® should be used with caution in conditions where hyper-volaemia and its consequences or haemodilution could represent a special risk for the patient. Examples of such conditions are:

- Decompensated cardiac insufficiency
- Hypertension
- Oesophageal varices
- Pulmonary oedema
- Haemorrhagic diathesis
- Severe anaemia

- Renal and post-renal anuria

Caution is advised in the use of **ALBUMIN HUMAN 20 % OCTAPHARMA®** in patients with severe traumatic brain injury.

The colloid-osmotic effect of **ALBUMIN HUMAN 20 % OCTAPHARMA®** is approximately four times that of blood plasma. Therefore, when concentrated albumin is administered, care must be taken to assure adequate hydration of the patient. Patients should be monitored carefully to guard against circulatory overload and hyper-hydration.

ALBUMIN HUMAN 20 % OCTAPHARMA® is relatively low in electrolytes compared to the 4 to 5 % human albumin solutions. When albumin is given the electrolyte status of the patient should be monitored (see dosage and directions for use) and appropriate steps taken to restore or maintain the electrolyte balance.

If comparatively large volumes are to be replaced, controls of coagulation and haematocrit are necessary. Care must be taken to ensure adequate substitution of other blood constituents (coagulation factors, electrolytes, platelets and erythrocytes).

Hyper-volaemia may occur if the dosage and rate of infusion are not adjusted to the patient's circulatory situation. At the first clinical signs of cardiovascular overload (headache, dyspnoea, jugular vein congestion), or increased blood pressure, raised venous pressure and pulmonary oedema, the infusion is to be stopped immediately.

ALBUMIN HUMAN 20 % OCTAPHARMA® contains 144 – 160 mmol sodium per 1 000 ml solution and this must be taken into consideration when treating patients on a controlled sodium diet.

ALBUMIN HUMAN 20 % OCTAPHARMA® contains ≤ 10 mmol potassium per 1 000 ml solution and this must be taken into consideration when treating patients with reduced kidney function or patients on controlled potassium diet.

When medicinal products prepared from human blood or plasma are administered, infectious diseases due to transmission of infective agents cannot be totally excluded. This also applies to pathogens of unknown nature or emerging viruses.

The risk of transmission of infective agents is however reduced by:

- selection of donors by a medical interview and screening of individual donations and plasma pool for HBsAg and antibodies to HIV and HCV.
- testing of plasma pools for HCV genomic material.
- inactivation/removal procedures included in the production process that have been validated using model viruses. These procedures are considered effective for HIV, HCV, HAV and HBV.
- The viral removal/inactivation procedures may be of limited value against non-enveloped viruses such as parvovirus B19.

ALBUMIN HUMAN 20 % OCTAPHARMA® manufactured to European Pharmacopoeia specifications by established processes has a reassuring viral safety record.

In the interest of the patients, it is recommended that, whenever possible, every time that **ALBUMIN HUMAN 20 % OCTAPHARMA®** is administered to them, the name and batch number of the product is recorded.

Effects on ability to drive and use machines

No effects on ability to drive and use machines have been observed.

Interactions

No specific interactions of **ALBUMIN HUMAN 20 % OCTAPHARMA®** with other medicinal products are known.

Pregnancy and lactation

The safety of **ALBUMIN HUMAN 20 % OCTAPHARMA®** for use in pregnancy and lactation has not been established. However clinical experience with albumin suggests that no harmful effects on the course of pregnancy, or the foetus and the neonate are to be expected.

Dosage and directions for use

The concentration of **ALBUMIN HUMAN 20 % OCTAPHARMA®**, dosage and the infusion-rate should be adjusted to the patient's individual requirements.

The dose required depends on the size of the patient, the severity of trauma or illness and on continuing fluid and protein losses. Measures of adequacy of circulating volume and not plasma albumin levels should be used to determine the dose required.

If **ALBUMIN HUMAN 20 % OCTAPHARMA®** is to be administered, haemodynamic performance should be monitored regularly; this may include:

- arterial blood pressure and pulse rate
- central venous pressure
- pulmonary artery wedge pressure
- urine output
- electrolyte
- haematocrit/haemoglobin

This product is suitable for premature infants and dialysis patients.

Method of administration:

ALBUMIN HUMAN 20 % OCTAPHARMA® can be directly administered by the intravenous route using a sterile and pyrogen-free disposable infusion set. The preparation should be warmed up to room or body temperature.

The infusion rate should be adjusted according to the individual circumstances and the indication.

In plasma exchange the infusion rate may be higher and should be adjusted to the rate of removal.

The solution should be clear or slightly opalescent. Do not use solutions which are cloudy or have deposits. This may indicate that the protein is unstable or that the solution has become contaminated.

Once the infusion container has been opened the content should be used immediately.

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

Incompatibility:

ALBUMIN HUMAN 20 % OCTAPHARMA® should not be mixed with other medicines, (changes in pH and electrolyte balance might cause albumin precipitation), whole blood and packed red cells.

Albumin solutions must not be diluted with water for injections as this may cause haemolysis in recipients.

Side-effects

Adverse reactions for **ALBUMIN HUMAN 20 % OCTAPHARMA®** are rare. These reactions normally disappear rapidly when the infusion rate is slowed down or the infusion is stopped. In case of severe reactions, the infusion should be stopped and an appropriate treatment should be initiated.

The following adverse reactions have been observed for **ALBUMIN HUMAN 20 % OCTAPHARMA®** during the post-marketing phase.

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), including isolated reports.

System Organ Class	Rare	Very rare
Immune system disorders	anaphylactic reaction	anaphylactic shock
Psychiatric disorders		confusional state
Nervous system disorders		headache
Cardiac disorders		tachycardia bradycardia
Vascular disorders	hypotension	hypertension flushing
Respiratory, thoracic and mediastinal disorders		dyspnoea

System Organ Class	Rare	Very rare
Gastrointestinal disorders		nausea
Skin and subcutaneous tissue disorders		urticaria angioneurotic oedema rash erythematosus increased sweating
General disorders and administration site conditions		fever rigors

Known symptoms of over dosage and particulars of treatment

Hyper-volaemia may occur if the dosage and rate of infusion are too high. At the first clinical signs of cardiovascular overload (headache, dyspnoea, jugular vein congestion), or increased blood pressure, raised central venous pressure and pulmonary oedema, the infusion should be stopped immediately and the patient's haemodynamic parameters carefully monitored.

Treatment is supportive and symptomatic.

Identification

Clear, slightly viscous liquid; almost colourless, yellow, amber or green. Free of visible particles.

Presentation

50 ml of solution in infusion bottle (type II glass) with stopper (bromobutyl rubber).

Pack of 1 and packs of 10.

100 ml of solution in infusion bottle (type II glass) with stopper (bromobutyl rubber).

Pack of 1 and packs of 10.

Storage Instructions

Store and transport at 2 ºC to 25 ºC. Protect from light and DO NOT FREEZE.

Store in the original carton (secondary container) in order to protect from light.

Once the infusion container has been opened the content should be used immediately.

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

KEEP OUT OF THE REACH OF CHILDREN

Registration number

36/30.3/0057

Name and Business Address of the Holder of the Certificate of Registration

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