℞ Amphotericin B Emulsion 5 mg / mL (50 mg / 10 mL)

Amphogen™

Composition:
Each mL contains:
Amphotericin B I.P. ….....…. 5 mg
In a vehicle containing Soybean oil USP, Glycerin I.P, Purified Egg Lecithin, Sodium Hydroxide I.P and Water for Injections IP.

Route of administration: Intravenous Infusion.

Description: Amphotericin B Emulsion is a sterile, yellow coloured liquid for intravenous infusion containing Amphotericin B suspended in an oil-in-water emulsion base. Amphotericin B is a polyene, antifungal antibiotic produced from a strain of Streptomyces nodosus. Amphotericin B has a molecular weight of 924.10 with a molecular formula of $C_{47}H_{73}NO_{17}$.

Mechanism of Action: The Amphotericin B, acts by binding to sterols in the cell membrane of susceptible fungi, with a resultant change in the permeability of the membrane.

Pharmacodynamic Properties: Amphotericin B is an oil-in-water emulsion. Amphotericin B is a macrocyclic, polyene antifungal antibiotic produced by Streptomyces nodosus. After administration of Amphotericin B, it gets released from the oily phase in the monomeric form which is less toxic compared to oligomeric form contained in conventional formulation. A strong interaction between Amphotericin B and oil droplets forms a reservoir of the monomeric form of Amphotericin B. The monomeric form of Amphotericin B has more affinity towards parasite cell wall, hence, binds strongly to the parasite cells inducing lethality. However, the same monomeric form of Amphotericin B has less affinity with cholesterol of mammalian cells and hence less toxic to the mammalian cells.

Therapeutic Indications: Amphotericin B is indicated for the treatment of:
- Visceral leishmaniasis (Kala Azar).
- Febrile neutropenia in Cancer Patients.

Dosage and administration:
Dosage: The recommended daily dosage for adults and children is 5 mg/kg given as a single infusion, administered intravenously at a rate of about 2.5 mg/kg/hour.
For Kala Azar: The recommended total dose for adults and children for the treatment of Visceral Leishmaniasis (Kala Azar) is 15mg/kg and can be administered in any one of the following dosing regimen:
1. A single dose of 15mg/kg/day administered over a period of 4 hours (not recommended for children below 5 years of age)
2. A dose of 5mg/kg/day on three alternate days.
3. A dose of 7.5mg/kg/day on two alternate days.

For Febrile neutropenia: The recommended dose is 5 mg/kg/day. Administration: Amphotericin B should always be mixed with 5% Dextrose Injection and administered as an infusion mixture. The recommended concentration for intravenous infusion is 0.5 mg/ml to 2 mg/ml.

Preparation of infusion mixture: Shake the vial gently and withdraw the contents from the vials into one or more 10 / 20ml syringes using 18 gauge needle. Remove the needle from each syringe filled with Amphotericin B. Attach to the syringe the 5µ syringe filter provided with each vial pack and then fix the 18 gauge needle to the other end of the syringe filter. Insert the needle into an I.V. bag containing 5% Dextrose Injection and empty the contents of the syringe into the bag. Shake the bag until the contents are thoroughly mixed. Do not use the infusion mixture if there is any visible evidence of foreign matter.
Aseptic technique must be strictly observed throughout handling of Amphotericin B, since no preservative is present in Amphotericin B. Amphotericin B vials are for single use and hence any unused product should be discarded from the used vials.
DO NOT DILUTE AMPHOTERICIN B WITH SODIUM CHLORIDE INJECTION (SALINE) OR MIX WITH OTHER DRUGS OR ELECTROLYTES. DO NOT USE AN ON-LINE MICROBIAL FILTER (0.2µ Pore Size). DURING ADMINISTRATION OF AMPHOTERICIN B MIXTURE FOR INFUSION, GENTLY SHAKE THE CONTENTS OF THE INFUSION BAG EVERY ONE HOUR FOR PROPER MIXING. IT IS NOT ADVISABLE TO STORE AMPHOTERICIN B MIXTURE FOR INFUSION.
During administration of AMPHOTERICIN B, serum creatinine level should be measured to monitor the renal toxicity. Dose adjustments should be made only after taking into account the overall clinical condition of the patient.

Contra-Indications: Amphotericin B is contra-indicted in patients who have shown hypersensitivity to Amphotericin B or any other component included in the formulation.

Warnings: Anaphylaxis has been reported with the administration of Amphotericin B containing preparations. If severe respiratory distress occurs the infusion should be immediately discontinued and the patient should not receive further infusions of Amphotericin B.

Precautions: Amphotericin B should be administered under close clinical observation. Fever and chills may occur 1-2 hours after administration of Amphotericin B. Amphotericin B is known to cause sometimes hyperpnoea, respiratory strider and modest hypotension. True bronchospasm or anaphylaxis is rare. As a precautionary measure, a test dose of Amphotericin B equivalent to 1 mg of Amphotericin B is always recommended to be infused slowly. The patients should be observed for 2 hours prior to infusing the usual therapeutic dose. Serum creatinine should be monitored during Amphotericin B therapy. It is also advisable to regularly monitor liver function, blood count and serum magnesium and potassium content.

Drug Interactions: Amphotericin B is known to interact with the following drugs, which should be thus administered with caution. Since nephrotoxic effects may be additive, the concurrent or sequential use of Amphotericin B and other drugs with similar toxic potentials (e.g., aminoglycosides, capreomycin, colistin, cisplatin, cyclosporine, methoxyflurane, pentamidine, polymyxin B, vancomycin) should be avoided, if possible. Intensive monitoring of renal function is recommended if Amphotericin B is used concomitantly with any of the known nephrotoxic drugs. Amphotericin B can interact with following drugs: Antineoplastic agents (concurrent use may enhance potential for renal toxicity), Corticosteroids and ACTH (may potentiate hypokalemia), Digoxin (Nephrotoxicity may decrease digoxin clearance and hypokalemia can potentiate toxicity of digoxin), Leukocyte transfusions (acute pulmonary toxicity if given concurrently), Zidovudine (increased myelosuppression and nephrotoxicity). Amphotericin B may potentiate the effects of skeletal muscle relaxants due to hypokalemia.

Pregnancy And Lactation: Amphotericin B should only be used during pregnancy or breast feeding if the possible benefits to be derived outweigh the potential risks involved. It is not known if Amphotericin B is excreted in human milk.

Undesirable Effects: Fever and chills / rigors are the most commonly experienced infusion related reactions expected to occur during administration of Amphotericin B when no premedication to prevent these reactions is provided. Amphotericin B treated patients experienced a significantly lower incidence of infusion-related reactions.

Overdose: If overdose occurs, stop administration of Amphotericin B immediately. Carefully monitor clinical symptoms, monitor renal and hepatic function, serum electrolytes and hematological parameters. Amphotericin B has a large safety margin over the clinical dosage recommended. However, the toxicity of Amphotericin B due to overdose has not been studied.

Presentation: Amphotericin B is available in single use 10ml vials containing 50 mg Amphotericin B. Each vial pack is provided with 5µ syringe filter and package insert.

Storage: Store in a cool and dry place, below 25°C. Protect from light. Do not freeze.

Keep out of reach of children.

Contains no preservative.

Shake the vial gently before use.

Discard any unused portion.

Manufactured in India by : **Caplin Point Laboratories Ltd.,**
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Marketed by :
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