SMOFlipid® 20 %

Qualitative and Quantitative Composition: Active ingredients: 1,000 ml of emulsion for infusion contain: Soya-bean oil, refined 60.0 g, Triglycerides, medium-chain 60.0 g, Olive oil, refined 50.0 g, Fish oil, rich in omega-3 fatty acids 30.0 g. List of exipients: Glycerol, egg lecithin, all-rac-α-tocopherol, water for injections, sodium hydroxide for pH adjustment, sodium oleate. Total energy: 8.4 MJ (= 2000kcal/l). Osmolality: Approx. 380 mosm/kg, pH approx. 8.

Therapeutic indications: Supply of energy and essential fatty acids and omega-3 fatty acids to patients, as part of a parenteral nutrition regimen, when oral or enteral nutrition is impossible, insufficient or contraindicated. Posology and method of administration: The patient's ability to eliminate the fat infused, should govern the dosage and infusion rate, see section "Special warnings and precautions for use". ADULTS: The standard dose is 1.0 – 2.0 g fat/kg body weight (b.w.)/day, corresponding to 5 – 10 ml/kg b.w./day. The recommended infusion rate is 0.125 g fat/kg b.w./hour, corresponding to 0.63 ml SMOFlipid/kg b.w./hour, and should not exceed 0.15 g fat/kg b.w./hour, corresponding to 0.75 ml SMOFlipid/kg b.w./hour. PAEDIATRIC PATIENTS: Neonates and infants: The initial dose should be 0.5–1.0 g fat/kg b.w./day followed by a successive increase by 0.5–1.0 g fat/kg b.w./day up to 3.0 g fat/kg b.w./day. It is recommended not to exceed a daily dose of 3 g fat/kg b.w./d, corresponding to 15 ml SMOFlipid/kg b.w./day. The rate of infusion should not exceed 0.125 g fat/kg b.w./hour. In premature and low birthweight neonates, SMOFlipid should be infused continuously over about 24 hours. Children: It is recommended not to exceed a daily dose of 3 g fat/kg b.w./d, corresponding to 15 ml SMOFlipid/kg b.w./day. The daily dose should be increased gradually during the first week of administration. The infusion rate should not exceed 0.15 g fat/kg b.w./hour.

Contraindications: Hypersensitivity to fish-, egg-, soya- or peanut protein or to any of the active substances or excipients. Severe hyperlipidemia. Severe liver insufficiency. Severe blood coagulation disorders. Severe renal insufficiency without access to hemofiltration or dialysis. Acute shock. General contraindications to infusion therapy: acute pulmonary oedema, hyperhydration, decompensated cardiac insufficiency. Unstable conditions (e.g. severe post-traumatic conditions, uncompensated diabetes mellitus, acute myocardial infarction, stroke, embolism, metabolic acidosis and severe sepsis and hypotonic dehydration).

Special warnings and precautions for use: The capacity to eliminate fat is individual and should therefore be monitored according to the routines of the clinician. This is in general done by checking the triglyceride levels. Special caution should be taken in patients with a marked risk for hyperlipidema (e.g. patients with high lipid dosage, severe sepsis and extremely low birth weight infants). The concentration of triglycerides in serum should in general not exceed 3 mmol/l during infusion. Reduction of the dosage or cessation of the lipid emulsion should be considered if serum or plasma triglyceride concentrations during or after infusion exceed 3 mmol/L. An overdose may lead to fat overload syndrome, see section "Undesirable effects". This medicinal product contains soya-bean oil, fish oil and egg phospholipids, which may rarely cause allergic reactions. Cross allergic reaction has been observed between soya-bean and peanut. SMOFlipid should be given with caution in conditions of impaired lipid metabolism, which may occur in patients with renal failure, diabetes mellitus, pancreatitis, impaired liver function, hypothyroidism, and sepsis. Clinical data in patients with diabetes mellitus or renal failure are limited. Administration of medium-chain fatty acids alone can result in metabolic acidosis. This risk is to a great extent eliminated by the simultaneous infusion of the long chain fatty acids included in SMOFlipid. Concomitant administration of carbohydrates will further eliminate this risk. Hence, simultaneous infusion of carbohydrate or a carbohydrate-containing amino acid solution is recommended. Laboratory test generally associated with monitoring of intravenous nutrition should be checked regularly. These include blood glucose levels, liver functions tests, acid base metabolism, fluid balance, full blood count and electrolytes. Any sign or symptom of anaphylactic reaction (such as fever, shivering, rash or dyspnoea) should lead to immediate interruption of the infusion. SMOFlipid should be given with caution to neonates and premature neonates with hyperbilirubinemia and cases with pulmonary hypertension. In neonates, particularly premature neonates on long term parenteral nutrition, blood platelet counts, liver function tests and serum triglycerides should be monitored. High levels of lipids in plasma may interfere with some laboratory blood tests, e.g. haemoglobin. The addition of other medicaments or substances to SMOFlipid should generally be avoided unless compatibility is known. Interactions with other medicinal products and other forms of interaction: Heparin given in clinical doses causes a transient increase in lipoprotein lipase release into the circulation. This may initially result in increased plasma lipolysis, followed by a transient decrease in triglyceride clearance.

Soya-bean oil has a natural content of vitamin K1. The content is however so low in SMOFlipid that it is not expected to significantly influence the coagulation process in patients treated with
coumarin derivatives. Pregnancy and lactation: There are no data available on exposure of SMOFlipid in pregnant or breast-feeding women. There are no studies available on reproductive toxicity in animals. Parenteral nutrition may become necessary during pregnancy and lactation. SMOFlipid should only be given to pregnant and breast-feeding women after careful consideration.
Undesirable effects: Undesirable effects observed during the administration of fat emulsions: Common ≥ 1/100 to < 1/10; Uncommon ≥ 1/1000 to < 1/100; Rare ≥ 1/10000 to < 1/1000; Very rare
< 1/10000 RESPIRATORY, THORIACIC AND MEDIASTINAL DISORDERS: Rare: Dyspnoea GASTROINTESTINAL DISORDERS: Uncommon: Lack of appetite, nausea, vomiting VASCULAR DISORDERS:
Rare: Hypotension, hypertension GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS: Common: Slight increase in body temperature; uncommon: Chills; rare: Hypersensitivityreactions (e.g. anaphylactic or anaphylactoid reactions, skin rash, urticaria, flush, headache), heat or cold sensation, paleness, cyanosis, pain in the neck, back, bones, chest and loins REPRODUCTIVE
SYSTEM AND BREAST DISORDERS: Very rare: Priapism. Should these side-effects occur or should the triglyceride level during infusion rise above 3 mmol/l, the infusion of SMOFlipid should be stopped or, if necessary, continued at a reduced dosage. SMOFlipid should always be a part of a complete parenteral nutritional treatment including amino acids and glucose. Nausea, vomiting
and hyperglycemia are symptoms related to conditions indicating parenteral nutrition and may sometimes be associated with parenteral nutrition. Monitoring of triglycerides and blood glucose levels are recommended to avoid elevated levels, which may be harmful. FAT OVERLOAD SYNDROME: Impaired capacity to eliminate triglycerides can lead to “Fat overload syndrome” which may
be caused by overdose. Possible signs of metabolic overload must be observed. The cause may be genetic (individually different metabolism) or the fat metabolism may be affected by ongoing or previous illnesses. This syndrome may also appear during severe hypertriglyceridemia, even at the recommended infusion rate, and in association with a sudden change in the patient’s clinical condition, such as renal function impairment or infection. The fat overload syndrome is characterised by hyperlipemia, fever, fat infiltration, hepatomegaly with or without icterus, splenomegaly, anemia, leukopenia, thrombocytopenia, coagulation disorder, hemolysis and reticulocytosis, abnormal liver function tests and coma. The symptoms are usually reversible if the infusion of the fat emulsion is discontinued. Should signs of a fat overload syndrome occur, the infusion of SMOFlipid should be discontinued.

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