1. Name of the medicinal product

RIPOL 20MG/ML

2. Qualitative and quantitative composition

Each ml solution contains 20mg propofol.

Each 50ml vial contains 1000mg propofol.

Excipients with known effect:

1 ml emulsion for injection/infusion contains 100mg refined soybean oil and Sodium hydroxide q.s to p.h 7.5-8.5.

It contains no preservatives.

For the full list of excipients, see Section 6.1.

3. Pharmaceutical form

Emulsion for injection or infusion.

RIPOL 20MG/ML is a white to almost white homogeneous emulsion, practically free of extraneous particulate contamination and of large oil droplets. Slightly creaming and may be visible on prolonged standing.

4. Clinical particulars

4.1 Therapeutic indications

RIPOL 20MG/ML is a short-acting intravenous general anaesthetic for:

- induction and maintenance of general anaesthesia in adults and children > 3 years .
- sedation of ventilated patients > 16 years of age in the intensive care unit.
- sedation for diagnostic and surgical procedures, alone or in combination with local or regional anaesthesia in adults and children > 3 years.

4.2 Posology and method of administration

Posology

4.2.1 Induction of General Anaesthesia

Propofol must be used only in well equipped hospitals or medical centers by doctors trained in anaesthesia or the treatment of intensive care patients.

Continual monitoring of the circulation and the respiration (for example, ECG pulse oxymeter) is necessary. Provisions for prevention of airway obstruction, artificial respiration and other resuscitation provisions must be immediately available at all times. As regards to sedation during surgical or diagnostic operations, propofol must not be administered by the same person who performs the surgical or diagnostic operation.

Additional analgesics are generally necessary in combination with propofol.

Adults

RIPOL 20MG/ML may be used to induce anaesthesia by infusion. Administration of RIPOL 20MG/ML by bolus injection is not recommended.

RIPOL 20MG/ML may be used to induce anaesthesia by infusion, but only in patients who will receive RIPOL 20MG/ML for maintenance of anaesthesia.

In unpremedicated and premedicated patients, it is recommended that RIPOL 20MG/ML should be titrated (approximately 2ml [40mg] every 10 seconds in an average healthy adult by infusion) against the response of the patient until the clinical signs show the onset of anaesthesia. Most adult patients aged less than 55 years are likely to require 1.5–2.5mg/ kg of RIPOL 20MG/ML. The total dose required can be reduced by lower rates of administration (1–2.5 ml/min [20–50mg/min]).

In patients over this age and in patients of ASA grades III and IV, especially those with impaired cardiac function, the dosage requirements will be reduced and the total dose of RIPOL 20MG/ML may be reduced to a minimum of 1 mg/kg body weight. In these patients lower rates of administration should be applied (approximately 1 ml, corresponding to 20 mg every 10 seconds).

Elderly

In older people the dose requirement for induction of anaesthesia with RIPOL 10MG/ML is reduced. The reduction should take into account the physical status and age of the patient. The reduced dose should be given at a slower rate and titrated against the response.

Paediatric population

RIPOL 20MG/ML is not indicated for induction of anaesthesia in children less than 3 years of age.

For induction of anaesthesia in children over 3 years of age, RIPOL 20MG/ML should be titrated slowly until clinical signs show the onset of anaesthesia. The dose should be adjusted according to age and/or body weight. Most patients over 8 years of age require approximately 2.5 mg/kg body weight of RIPOL 20MG/ML for induction of anaesthesia. In younger children, dose requirements may be higher (2.5–4 mg/kg body weight).

For ASA 3 and 4 patients, lower doses are recommended (see also Section 4.4).

4.2.2 Maintenance of General Anaesthesia

Anaesthesia can be maintained by administering RIPOL 20MG/ML by continuous infusion to prevent the clinical signs of light anaesthesia. Administration of RIPOL 20MG/ML by bolus injection is not recommended. Recovery from anaesthesia is typically rapid and it is therefore important to maintain RIPOL 20MG/ML administration until the end of the procedure.

Adults

The required rate of administration varies considerably between patients, but rates in the region of 4–12 mg/kg/h usually maintain satisfactory anaesthesia.

Elderly

When RIPOL 20MG/ML is used for maintenance of anaesthesia, the rate of infusion or 'target concentration' should also be reduced. Patients of ASA grades 3 and 4 will require further reductions in dose and dose rate. Rapid bolus administration (single or repeated) should not be used in older people as this may lead to cardiorespiratory depression.

Paediatric population

RIPOL 20MG/ML is not indicated for maintenance of anaesthesia in children less than 3 years of age.

Anaesthesia can be maintained in children over 3 years of age by administering RIPOL 20MG/ML by infusion to maintain the depth of anaesthesia required. The required rate of administration varies considerably between patients, but rates in the region of 9–15 mg/kg/h usually achieve satisfactory anaesthesia. In younger children, dose requirements may be higher.

For ASA 3 and 4 patients, lower doses are recommended (see also Section 4.4).

4.2.3 Sedation During Intensive Care

Adults

For sedation during intensive care it is advised that RIPOL 20MG/ML should be administered by continuous infusion. The infusion rate should be determined by the desired depth of sedation. In most patients sufficient sedation can be obtained with a dosage of 0.3–4 mg/kg/h of RIPOL 20MG/ML (see section 4.4 Special warnings and precautions for use). RIPOL 20MG/ML is not indicated for sedation in intensive care of patients of 16 years of age or younger (see 4.3 Contraindications).

It is recommended that blood lipid levels be monitored should RIPOL 20MG/ML be administered to patients thought to be at particular risk of fat overload.

Administration of RIPOL 20MG/ML should be adjusted appropriately if the monitoring indicates that fat is being inadequately cleared from the body. If the patient is receiving other intravenous lipid concurrently, a reduction in quantity should be made in order to take account of the amount of lipid infused as part of the RIPOL 20MG/ML formulation; 1.0 ml of RIPOL 20MG/ML contains approximately 0.1g of fat. If the duration of sedation is in excess of 3 days, lipids should be monitored in all patients.

Elderly

When RIPOL 20MG/ML is used for sedation of anaesthesia, the rate of infusion should also be reduced. Patients of ASA grades 3 and 4 will require further reductions in dose and dose rate. Rapid bolus administration (single or repeated) should not be used in older people as this may lead to cardiorespiratory depression.

Paediatric population

RIPOL 20MG/ML is contraindicated for the sedation of ventilated children aged 16 years or younger receiving intensive care.

4.2.4 Sedation for Surgical and Diagnostic Procedures

Adults

To provide sedation for surgical and diagnostic procedures, rates of administration should be individualized and titrated to clinical response.

Most patients will require 0.5–1 mg/kg over 1– 5 minutes for onset of sedation. Maintenance of sedation may be accomplished by titrating RIPOL 20MG/ML infusion to the desired level of sedation - most patients will require 1.5–4.5 mg/kg/h. In patients of ASA Grades 3 and 4, the rate of administration and dosage may need to be reduced. According to required dose, alternatively RIPOL 10MG/ML may be used.

Elderly

When RIPOL 20MG/ML is used for sedation, the rate of infusion or 'target concentration' should also be reduced. Patients of ASA grades 3 and 4 will require further reductions in dose and dose rate. Rapid bolus administration (single or repeated) should not be used in older people as this may lead to cardiorespiratory depression.

Paediatric population

RIPOL 20MG/ML is not indicated for surgical and diagnostic procedures in children aged less than 3 years.

In children over 3 years of age, doses and administration rates should be adjusted according to the required depth of sedation and the clinical response. Most paediatric patients require 1–2 mg/kg body weight of RIPOL 20MG/ML for onset of sedation.

Maintenance of sedation may be accomplished by titrating RIPOL 20MG/ML infusion to the desired level of sedation. Most patients require 1.5–9 mg/kg/h RIPOL 20MG/ML. In ASA 3 and 4 patients lower doses may be required.

4.2.5 Method of administration

Propofol 20 mg/ml should be administered undiluted intravenously.

Propofol 20 mg/ml must not be mixed with injection or infusion fluids. However, simultaneous administration of propofol 20 mg/ml together with an infusion of glucose 5% or sodium chloride 0.9% via a Y - connector close to the injection site is possible.

Vials should be shaken before use.

Before using the rubber stopper of the infusion, vial must be disinfected with medicinal alcohol (spray or tissues). After use, any remaining medicine must be destroyed.

Propofol does not contain any preservatives and promotes the growth of micro-organisms. After piercing a vial, the contents must therefore immediately be put aseptically into a sterile syringe or infusion system and then administered directly. During the infusion period the sterility of both propofol and the infusion system should be maintained.

Medicines or fluids that are added to a running propofol infusion must be added close to the cannula. Propofol must not be administered via infusion systems that are provided with microbial filters. The contents of a vial of propofol and any syringe of propofol are intended for single administration to one patient. Any remaining medicine must be destroyed after use.

Infusion of undiluted propofol 20 mg/ml

When propofol is administered by means of a continuous infusion, control of the infusion rate by means of a burette, drop counter, syringe pump or volumetric infusion pump is recommended. As is the case for parenteral administration of all kinds of fat emulsions, the duration of use of one infusion system for a continuous infusion with propofol must remain limited to 12 hours. The infusion system and the container must be removed and replaced after a maximum of 12 hours. Residues of propofol left over at the end of the infusion period or after changing of the system must be destroyed.

In order to diminish pain at the beginning of the injection of propofol 20 mg/ml for induction of general anaesthesia, lidocaine can be injected directly before injection of propofol 20 mg/ml.

Before administering the muscle relaxant atracurium, after administration of propofol, through the same infusion system, it is recommended to flush out the infusion system.

Duration of administration

Propofol can be administered for a maximum of 7 days.

4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.
- RIPOL 20MG/ML contains soybean oil and should not be used in patients who are hypersensitive to peanut or soya.
- RIPOL 20MG/ML must not be used in patients of 16 years of age or younger for sedation in intensive care (see section 4.4).

4.4 Special warnings and precautions for use

RIPOL 20MG/ML should be given by those trained in anaesthesia (or, where appropriate, doctors trained in the care of patients in Intensive Care).

Patients should be constantly monitored and facilities for maintenance of a patient airway, artificial ventilation, oxygen enrichment and other resuscitative facilities should be readily available at all times. RIPOL 20MG/ML should not be administered by the person conducting the diagnostic or surgical procedure.

The abuse of, and dependence on RIPOL 20MG/ML, predominantly by health care professionals, have been reported. As with other general anaesthetics, the administration of RIPOL 20MG/ML without airway care may result in fatal respiratory complications.

When RIPOL 20MG/ML is administered for conscious sedation for surgical and diagnostic procedures, patients should be continually monitored for early signs of hypotension, airway obstruction and oxygen desaturation.

During induction of anaesthesia, hypotension and transient apnoea may occur depending on the dose and use of premedicants and other agents.

Occasionally, hypotension may require use of intravenous fluids and reduction of the rate of administration of RIPOL 20MG/ML during the period of anaesthetic maintenance.

As with other sedative agents, when RIPOL 20MG/ML is used for sedation during operative procedures, involuntary patient movements may occur. During procedures requiring immobility, these movements may be hazardous to the operative site.

An adequate period is needed prior to discharge of the patient to ensure full recovery after use of RIPOL 20MG/ML. Very rarely the use of RIPOL 20MG/ML may be associated with the development of a period of post-operative unconsciousness, which may be accompanied by an increase in muscle tone. This may or may not be preceded by a period of wakefulness. Although recovery is spontaneous, appropriate care of an unconscious patient should be administered.

RIPOL 20MG/ML induced impairment is not generally detectable beyond 12 hours. The effects of RIPOL 20MG/ML, the procedure, concomitant medications, the age and the condition of the patient should be considered when advising patients on:

- The advisability of being accompanied on leaving the place of administration
- The timing of recommencement of skilled or hazardous tasks such as driving
- The use of other agents that may sedate (e.g., benzodiazepines, opiates, alcohol)

As with other intravenous anaesthetic agents, caution should be applied in patients with cardiac, respiratory, renal or hepatic impairment or in hypovolaemic or debilitated patients. RIPOL 20MG/ML clearance is blood flow dependent, therefore, concomitant medication that reduces cardiac output will also reduce RIPOL 20MG/ML clearance.

RIPOL 20MG/ML lacks vagolytic activity and has been associated with reports of bradycardia (occasionally profound) and also asystole. The intravenous administration of an anticholinergic agent before induction, or during maintenance of anaesthesia should be considered, especially in situations where vagal tone is likely to predominate, or when RIPOL 20MG/ML is used in conjunction with other agents likely to cause bradycardia.

When RIPOL 20MG/ML is administered to an epileptic patient, there may be a risk of convulsion.

Appropriate care should be applied in patients with disorders of fat metabolism and in other conditions where lipid emulsions must be used cautiously (see section 4.2).

Use is not recommended with electroconvulsive treatment.

As with other anaesthetics, sexual disinhibition may occur during recovery.

The benefits and risks of the proposed procedure should be considered prior to proceeding with repeated or prolonged use (>3 hours) of propofol in young children (< 3 years) and in pregnant women as there have been reports of neurotoxicity in preclinical studies, see Section 5.3.

Paediatric population

The use of RIPOL 20MG/ML is not indicated in newborn infants as this patient population has not been fully investigated. Pharmacokinetic data (see section 5.2) indicate that clearance is considerably reduced in neonates and has a very high inter-individual variability. Relative overdose could occur on administering doses recommended for older children and result in severe cardiovascular depression.

RIPOL 20MG/ML is not recommended for use in children <3 years of age due to difficulty in titrating small volumes. Propofol must not be used in patients of 16 years of age or younger for sedation for an intensive care as the safety and efficacy of propofol for sedation in this age group have not been demonstrated (see section 4.3).

Advisory statements concerning Intensive Care Unit management

Use of propofol emulsion infusions for ICU sedation has been associated with a constellation of metabolic derangements and organ system failures that may result in death. Reports have been received of combinations of the following: Metabolic acidosis, Rhabdomyolysis, Hyperkalaemia, Hepatomegaly, Renal failure, Hyperlipidaemia, Cardiac arrhythmia, Brugada-type ECG (elevated ST-segment and coved T-wave) and rapidly progressive Cardiac failure usually unresponsive to inotropic supportive treatment. Combinations of these events have been referred to as the Propofol Infusion Syndrome. These events were mostly seen in patients with serious head injuries and children with respiratory tract infections who received dosages in excess of those advised in adults for sedation in the intensive care unit.

The following appear to be the major risk factors for the development of these events: decreased oxygen delivery to tissues; serious neurological injury and/or sepsis; high dosages of one or more of the following pharmacological agents - vasoconstrictors, steroids, inotropes and/or Propofol (usually at dose rates greater than 4mg/kg/h for more than 48 hours).

Prescribers should be alert to these events in patients with the above risk factors and immediately discontinue propofol when the above signs develop. All sedative and therapeutic agents used in the intensive care unit (ICU), should be titrated to maintain optimal oxygen delivery and haemodynamic parameters. Patients with raised intra-cranial pressure (ICP) should be given appropriate treatment to support the cerebral perfusion pressure during these treatment modifications.

Treating physicians are reminded if possible not to exceed the dosage of 4 mg/kg/h.

Appropriate care should be applied in patients with disorders of fat metabolism and in other conditions where lipid emulsions must be used cautiously.

It is recommended that blood lipid levels should be monitored if propofol is administered to patients thought to be at particular risk of fat overload.

Administration of propofol should be adjusted appropriately if the monitoring indicates that fat is being inadequately cleared from the body. If the patient is receiving other intravenous lipid concurrently, a reduction in quantity should be made in order to take account of the amount of lipid infused as part of the propofol formulation; 1.0 mL of RIPOL 20MG/ML contains approximately 0.1 g of fat.

This medicinal product contains less than 1 mmol (23 mg) sodium in 100 ml, i.e. essentially 'sodium free'.

Additional Precautions

Caution should be taken when treating patients with mitochondrial disease. These patients may be susceptible to exacerbations of their disorder when undergoing anaesthesia, surgery and ICU care. Maintenance of normothermia, provision of carbohydrates and good hydration are recommended for such patients. The early presentations of mitochondrial disease exacerbation and of the 'Propofol Infusion Syndrome' may be similar.

RIPOL 20MG/ML contains no antimicrobial preservatives and supports growth of micro-organisms.

EDTA chelates metal ions, including zinc, and reduces microbial growth rates. The need for supplemental zinc should be considered during prolonged administration of RIPOL 20MG/ML, particularly in patients who are predisposed to zinc deficiency, such as those with burns, diarrhoea and/or major sepsis.

When RIPOL 20MG/ML is to be aspirated, it must be drawn aseptically into a sterile syringe or giving set immediately after breaking the vial seal. Administration must commence without delay. Asepsis must be maintained for both RIPOL 20MG/ML and infusion equipment throughout the infusion period. Any infusion fluids added to the RIPOL 20MG/ML line must be administered close to the cannula site. RIPOL 20MG/ML must not be administered via a microbiological filter.

RIPOL 20MG/ML and any syringe containing RIPOL 20MG/ML are for single use in an individual patient. In accordance with established guidelines for other lipid emulsions, a single infusion of RIPOL 20MG/ML must not exceed 12 hours. At the end of the procedure or at 12 hours, whichever is the sooner, both the reservoir of RIPOL 20MG/ML and the infusion line must be discarded and replaced as appropriate.

4.5 Interaction with other medicinal products and other forms of interaction

RIPOL 20MG/ML has been used in association with spinal and epidural anaesthesia and with commonly used premedicants, neuromuscular blocking drugs, inhalational agents and analgesic agents; no pharmacological incompatibility has been encountered. Lower doses of RIPOL 20MG/ML may be required where general anaesthesia is used as an adjunct to regional anaesthetic techniques. Profound hypotension has been reported following anaesthetic with propofol in patients treated with rifampicin.

The concurrent administration of other CNS depressants such as pre-medication drugs, inhalation agents and analgesic agents may add to the sedative, anaesthetic and cardiorespiratory depressant effects of RIPOL 20MG/ML (see Section 4.4).

A need for lower propofol doses has been observed in patients taking valproate. When used concomitantly, a dose reduction of propofol may be considered.

4.6 Fertility, pregnancy and lactation

Pregnancy

Teratology studies in rats and rabbits showed no teratogenic effects.

The safety of RIPOL 20MG/ML during pregnancy has not been established. Studies in animals have shown reproductive toxicity (see section 5.3). RIPOL 20MG/ML should not be given to pregnant women except when absolutely necessary. RIPOL 20MG/ML crosses the placenta and can cause neonatal depression. RIPOL 20MG/ML can, however, be used during an induced abortion.

Obstetrics

RIPOL 20MG/ML crosses the placenta and can cause neonatal depression. It should not be used for obstetric anaesthesia.

Breast-feeding

Studies of breast feeding mothers showed that small quantities of RIPOL 20MG/ML are excreted in human milk. Women should therefore not breast-feed for 24 hours after administration of RIPOL 20MG/ML. Milk produced during this period should be discarded.

4.7 Effects on ability to drive and use machines

RIPOL 20MG/ML has moderate influence on the ability to drive and use machines. Patients should be advised that performance at skilled tasks, such as driving and operating machinery, may be impaired for some time after general anaesthesia.

RIPOL 20MG/ML induced impairment is not generally detectable beyond 12 hours (Section 4.4).

4.8 Undesirable effects

General

Induction and maintenance of anaesthesia or sedation is generally smooth with minimal evidence of excitation. The most commonly reported ADRs are pharmacologically predictable side effects of an anaesthetic/sedative agent, such as hypotension. The nature, severity and incidence of adverse events observed in patients receiving RIPOL 20MG/ML may be related to the condition of the recipients and the operative or therapeutic procedures being undertaken.

The following definitions of frequencies are used:

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

Table of Adverse Drug Reactions

System Organ Class	Frequency	Undesirable Effects
Immune system disorders	Very rare	Anaphylaxis – may include angioedema, bronchospasm, erythema and hypotension
Metabolism and nutrition disorders	Frequency not known (9)	Metabolic acidosis (5), hyperkalaemia (5), hyperlipidaemia (5)
Psychiatric disorders	Not known (9)	Euphoric mood. Drug abuse and drug dependence (8)
Nervous system disorders	Common	Headache during recovery phase
	Rare	Epileptiform movements, including convulsions and opisthotonus during induction, maintenance and recovery
	Very rare	Postoperative unconsciousness
	Not known (9)	Involuntary movements
Cardiac disorders	Common	Bradycardia (1)
	Very rare	Pulmonary oedema
	Not known (9)	Cardiac arrhythmia (5), cardiac failure (5), (7)
Vascular disorders	Common	Hypotension (2)
	Uncommon	Thrombosis and phlebitis
Respiratory, thoracic and mediastinal disorders	Common	Transient apnoea during induction
	Not known (9)	Respiratory depression (dose dependent)
Gastrointestinal disorders	Common	Nausea and vomiting during recovery phase
	Very rare	Pancreatitis
Hepatobiliary disorders	Not known (9)	Hepatomegaly (5)
Musculoskeletal and connective tissue disorders	Not known (9)	Rhabdomyolysis (3), (5)
Renal and urinary disorders	Very rare	Discolouration of urine following prolonged administration
	Not known (9)	Renal failure (5)
Reproductive system and breast disorders	Very rare	Sexual disinhibition
	Not known	Priapism
General disorders and administration site conditions	Very common	Local pain on induction (4)
	Very rare	Tissue necrosis (10) following accidental extravascular administration
	Not known (9)	Local pain and swelling following accidental extravascular administration
Investigations	Not known (9)	Brugada type ECG (5), (6)
Injury, poisoning and procedural complications	Very rare	Postoperative fever

(1) Serious bradycardias are rare. There have been isolated reports of progression to asystole.

(2) Occasionally, hypotension may require use of intravenous fluids and reduction of the administration rate of RIPOL.

(3) Very rare reports of rhabdomyolysis have been received when RIPOL has been given at doses greater than 4 mg/kg/hr for ICU sedation.

(4) May be minimized by using the larger veins of the forearm and antecubital fossa. With RIPOL 10MG/ML local pain can also be minimized by the co-administration of lidocaine.

(5) Combinations of these events, reported as “Propofol Infusion Syndrome”, may be seen in seriously ill patients who often have multiple risk factors for the development of the events, see section 4.4.

(6) Brugada-type ECG - elevated ST-segment and coved T-wave in ECG.

(7) Rapidly progressive cardiac failure (in some cases with fatal outcome) in adults. The cardiac failure in such cases was usually unresponsive to inotropic supportive treatment.

(8) Abuse of and drug dependence on propofol, predominantly by health care professionals.

(9) Not known as it cannot be estimated from the available clinical trial data.

(10) Necrosis has been reported where tissue viability has been impaired. Dystonia/ dyskinesia have been reported.

Local

The local pain which may occur during the induction phase can be minimized by the use of the larger veins of the forearm and antecubital fossa. Thrombosis and phlebitis are rare. Accidental clinical extravasation and animal studies showed minimal tissue reaction. Intra-arterial injection in animals did not induce local tissue effects.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorization of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product.

Any suspected adverse events should be reported to the Ministry of Health according to the National Regulation by using an online form:

https://sideeffects.health.gov.il

4.9 Overdose

Accidental overdosage is likely to cause cardiorespiratory depression. Respiratory depression should be treated by artificial ventilation with oxygen. Cardiovascular depression would require lowering of the patient’s head and, if severe, use of plasma expanders and pressor agents.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Other general anaesthetics
ATC code: N01AX10

Mechanism of action

Propofol (2, 6-diisopropylphenol) is a short-acting general anaesthetic agent with a rapid onset of action of approximately 30 seconds. Recovery from anaesthesia is usually rapid. The mechanism of action, like all general anaesthetics, is poorly understood. However, propofol is thought to produce its sedative/anaesthetic effects by the positive modulation of the inhibitory function of the neurotransmitter GABA through the ligand-gated $GABA_A$ receptors.

Pharmacodynamic effects

In general, falls in mean arterial blood pressure and slight changes in heart rate are observed when RIPOL 20MG/ML is administered for induction and maintenance of anaesthesia. However, the haemodynamic parameters normally remain relatively stable during maintenance and the incidence of untoward haemodynamic changes is low.

Although ventilatory depression can occur following administration of RIPOL 20MG/ML, any effects are qualitatively similar to those of other intravenous anaesthetic agents and are readily manageable in clinical practice.

RIPOL 20MG/ML reduces cerebral blood flow, intracranial pressure and cerebral metabolism. The reduction in intracranial pressure is greater in patients with an elevated baseline intracranial pressure.

Clinical efficacy and safety

Recovery from anaesthesia is usually rapid and clear headed with a low incidence of headache and post-operative nausea and vomiting.

In general, there is less post-operative nausea and vomiting following anaesthesia with RIPOL 20MG/ML than following anaesthesia with inhalational agents. There is evidence that this may be related to a reduced emetic potential of propofol.

RIPOL 20MG/ML, at the concentrations likely to occur clinically, does not inhibit the synthesis of adrenocortical hormones.

Paediatric population

Limited studies on the duration of propofol based anaesthesia in children indicate safety and efficacy is unchanged up to duration of 4 hours. Literature evidence of use in children documents use for prolonged procedures without changes in safety or efficacy.

5.2 Pharmacokinetic properties

Absorption

When RIPOL 20MG/ML is used to maintain anaesthesia, blood concentrations asymptotically approach the steady-state value for the given administration rate.

Distribution

Propofol is extensively distributed and rapidly cleared from the body (total body clearance 1.5–2 liters/minute).

Elimination

The decline in propofol concentrations following a bolus dose or following the termination of an infusion can be described by a three compartment open model with very rapid distribution (half-life 2 –4 minutes), rapid elimination (half-life 30 –60 minutes), and a slower final phase, representative of redistribution of propofol from poorly perfused tissue.

Clearance occurs by metabolic processes, mainly in the liver where it is blood flow dependent, to form inactive conjugates of propofol and its corresponding quinol, which are excreted in urine.

After a single dose of 3 mg/kg intravenously, propofol clearance/kg body weight increased with age as follows: Median clearance was considerably lower in neonates <1 month old (n=25) (20 ml/kg/min) compared to older children (n= 36, age range 4 months–7 years). Additionally, inter-individual variability was considerable in neonates (range 3.7–78 ml/kg/min). Due to this limited trial data that indicates a large variability, no dose recommendations can be given for this age group.

Median propofol clearance in older aged children after a single 3 mg/kg bolus was 37.5 ml/min/kg (4-24 months) (n=8), 38.7 ml/min/kg (11–43 months) (n=6), 48 ml/min/kg (1–3 years)(n=12), 28.2 ml/min/kg (4–7 years)(n=10) as compared with 23.6 ml/min/kg in adults (n=6).

Linearity

The pharmacokinetics are linear over the recommended range of infusion rates of RIPOL 20MG/ML.

5.3 Preclinical safety data

Published studies in animals (including primates) at doses resulting in light to moderate anaesthesia demonstrate that the use of anaesthetic agents during the period of rapid brain growth or synaptogenesis results in cell loss in the developing brain that can be associated with prolonged cognitive deficiencies. Based on comparisons across species, the window of vulnerability to these changes is believed to correlate with exposures in the third trimester through the first several months of life, but may extend out to approximately 3 years of age in humans.

In neonatal primates, exposure to 3 hours of an anaesthetic regimen that produced a light surgical plane of anaesthesia did not increase neuronal cell loss, however, treatment regimens of 5 hours or longer increased neuronal cell loss. The clinical significance of these nonclinical findings is not known, and healthcare providers should balance the benefits of appropriate anaesthesia in young children less than 3 years of age and pregnant women who require procedures against the potential risks suggested by the preclinical data.

Propofol is a drug on which extensive clinical experience has been obtained. All relevant information for the prescriber is provided elsewhere in this document.

6. Pharmaceutical particulars

6.1 List of excipients

Soybean oil, glycerol, egg phospholipids, sodium hydroxide and water for injection.

6.2 Incompatibilities

RIPOL 20MG/ML should not be mixed prior to administration with injections or infusion fluids. However, RIPOL 20MG/ML may be administered via a Y-piece connector close to the injection site with the products mentioned in section 4.2.

The neuromuscular blocking agent, atracurium, should not be given through the same intravenous line as RIPOL 20MG/ML without prior flushing.

6.3 Shelf life

The expiry date of the product is indicated on the packaging materials.

Shelf life after dilution

RIPOL 20MG/ML should not be diluted.

6.4 Special precautions for storage

Store below 25°C. Do not freeze.

Keep the vial in the outer carton to protect from light.

6.5 Nature and contents of container

Glass vials of 50 ml with a bromobutilyc rubber stopper.

Cardboard box containing 1 glass vial.

6.6 Special precautions for disposal and other handling

In-use precautions

Vials must be shaken before use.

Any portion of the contents remaining after use should be discarded.

If two layers remain visible after shaking, the product should not be used.

Additional precautions

RIPOL 20MG/ML contains no antimicrobial preservatives and supports growth of micro-organisms. Asepsis must be maintained for both RIPOL 20MG/ML and infusion equipment throughout the infusion period. Any drugs or fluids added to the RIPOL 20MG/ML infusion line must be administered close to the cannula site. RIPOL 20MG/ML must not be administered via a microbiological filter.

RIPOL 20MG/ML and any syringe containing RIPOL 20MG/ML are for single use in an individual patient. For use in long-term maintenance of anaesthesia or sedation in intensive care it is recommended that the infusion line and reservoir of RIPOL 20MG/ML be discarded and replaced at regular intervals.

7. Manufacturer

CORDEN PHARMA S.P.A, Caponago (MB), Italy.

8. License Holder

RAZ PHARMACEUTICS LTD., 6 Hamatechet st., Kadima, Israel.

9. Registration No: 159-43-34442-00

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