For the use only of a Registered Medical Practitioner or a Hospital or a Laboratory

Paracetamol Infusion IP (1.0% W/v)

AMERICAN
PARACAN
Infusion

Composition :
Each 100 ml Contains :

Paracetamol IP	1.00 gm
Water For Injections IP	q.s.

FOR I.V. INFUSION ONLY.

PHARMACODYNAMIC PROPERTIES:
The precise mechanism of the analgesic and antipyretic properties of paracetamol has yet to be established; it may involve central and peripheral actions.

PHARMACOKINETIC PROPERTIES:

ABSORPTION:
Paracetamol pharmacokinetics is linear up to 2 g after single administration and after repeated administration during 24 hours.

DISTRIBUTION:
The volume of distribution of paracetamol is approximately 1 L/kg. Paracetamol is not extensively bound to plasma proteins.

METABOLISM:
Paracetamol is metabolised mainly in the liver following two major hepatic pathways: glucuronic acid conjugation and sulphuric acid conjugation. The later route is rapidly saturable at doses that exceed the therapeutic doses.

ELIMINATION:
The metabolites of paracetamol are mainly excreted in the urine 90% of the dose administered is excreted within 24 hours, mainly as glucuronide (60-80%) and sulphate (20-30%) conjugates. Less than 5% is eliminated unchanged. Plasma half-life is 2.7 hours and total body clearance is 18 L/h.

THERAPEUTIC INDICATIONS:
Is indicated for the short-term treatment of moderate pain, especially following surgery, and for the short-term treatment of fever, when administration by intravenous route is clinically justified by an urgent need to treat pain or hyperthermia and/or when other routes of administration are not possible.

POSOLOGY AND METHOD OF ADMINISTRATION:
Intravenous use. The 100ml dosage is restricted to adults, adolescents and children weighing more than 33 kg (approximately 11 years old). The 50 ml dosage is restricted to term newborn infants, infants, toddlers and children weighing less than 33 kg.

Posology

- **Adolescents and adults weighing more than 50 kg :**
  Paracetamol 1 g per administration, i.e. one 100 ml bottle, up to four times a day. The minimum interval between each administration must be 4 hours. The maximum daily dose must not exceed 4 g.
- **Children weighing more than 33 kg (approximately 11 years old), adolescents and adults weighing less than 50 kg :**
  Paracetamol 15 mg/kg per administration, i.e. 1.5 ml solution per kg up to four times a day. The minimum interval between each administration must be 4 hours. The maximum daily dose must not exceed 60 mg/kg (without exceeding 3g).
- **Children weighing more than 10kg (approximately 1 year old) and weighing less than 33kg:**
  Paracetamol 15mg/kg per administration, i.e. 1.5ml solution per kg up to four times a day. The minimum interval between each administration must be 4 hours. The maximum daily dose must not exceed 60mg/kg (without exceeding 2g)
- **Term newborn infants, infants, toddlers and children weighing less than 10kg (up to approximately 1 year old):**
  Paracetamol 7.5mg/kg per administration i.e. 0.75ml solution per kg up to four times a day. The minimum interval between each administration must be 4 hours. The maximum daily dose must not exceed 30mg/kg. No safety and efficacy data are available for premature neonates.
- **Severe renal insufficiency:**
  It is recommended, when giving paracetamol to patients with severe renal impairment (creatinine clearance 30 mL/min), to increase the minimum interval between each administration to 6 hours.

Method of administration
The paracetamol solution is administered as a 15-minute intravenous infusion.

CONTRAINDICATIONS:
In patients with hypersensitivity to paracetamol or to propacetamol hydrochloride (prodrug of paracetamol) or to any of the excipients. In cases of severe hepatocellular insufficiency.

SPECIAL WARNINGS AND PRECAUTIONS FOR USE:
It is recommended that a suitable analgesic oral treatment be used as soon as this route of administration is possible.

PRECAUTIONS FOR USE:
Paracetamol should be used with caution in cases of: Hepatocellular insufficiency, severe renal insufficiency (creatinine clearance ,< 30 ml/min) chronic alcoholism, chronic malnutrition (low reserves of hepatic glutathione), dehydration.

INTERACTION WITH OTHER MEDICINAL PRODUCTS AND OTHER FORMS OF INTERACTION:

- Probenecid causes an almost 2-fold reduction in clearance of paracetamol by inhibiting its conjugation with glucuronic acid. A reduction in the paracetamol dose should be considered if it is to be used concomitantly with probenecid.
- Salicylamide may prolong the elimination t1/2 of paracetamol.
- Caution should be taken with the concomitant intake of enzyme-inducing substances.
- Concomitant use of paracetamol (4 g per day for at least 4 days) with oral anticoagulants may lead to slight variations of INR values. In this case, increased monitoring of INR values should be conducted during the period of concomitant use as well as for 1 week after paracetamol treatment has been discontinued.

PREGNANCY AND LACTATION:

PREGNANCY:
Clinical experience of the intravenous administration of paracetamol is limited. However, epidemiological data from the use of oral therapeutic doses of paracetamol indicate no undesirable effects in pregnancy or on the health of the foetus / newborn infant.

Prospective data on pregnancies exposed to overdoses did not show any increase in the risk of malformation.

LACTATION:
After oral administration, paracetamol is excreted into breast milk in small quantities. No undesirable effects on nursing infants have been reported. Consequently, Paracetamol may be used in breast-feeding women.

EFFECTS ON ABILITY TO DRIVE AND USE MACHINES:
Paracetamol at recommended doses has no obvious effects on central nervous system function.

UNDESIRABLE EFFECTS:

RARELY:
Malaise, Hypotension, Increased levels of hepatic transaminases.

VERY RARE:
Hypersensitivity reaction, Thrombocytopenia Leucopenia, Neutropenia, hypersensitivity reactions ranging from simple skin rash or urticaria to anaphylactic shock have been reported and require discontinuation of treatment.

OVERDOSE:
There is a risk of poisoning, particularly in elderly subjects, in young children, in patients with liver disease, in cases of chronic alcoholism, in patients with chronic malnutrition and in patients receiving enzyme inducers. Overdosing may be fatal in these cases.

Symptoms generally appear within the first 24 hours and comprise : nausea, vomiting, anorexia, pallor and abdominal pain.

Overdose, 7.5 g or more of paracetamol in a single administration in adults or 140 mg/kg of body weight in a single administration in children, causes hepatic cytolysis likely to induce complete and irreversible necrosis, resulting in hepatocellular insufficiency, metabolic acidosis and encephalopathy which may lead to coma and death. Simultaneously, increased levels of hepatic transaminases (AST, ALT), lactate dehydrogenase and bilirubin are observed together with decreased prothrombin levels that may appear 12 to 48 hours after administration. Clinical symptoms of liver damage are usually evident initially after two days, and reach a maximum after 4 to 6 days.

EMERGENCY MEASURES:
Immediate hospitalisation. Before beginning treatment, take a blood sample for plasma paracetamol assay, as soon as possible after the overdose.

The treatment includes administration of the antidote, N-acetylcysteine (NAC) by the i.v. or oral route, if possible before the 10th hour. NAC can, however, give some degree of protection even after 10 hours, but in these cases prolonged treatment is given.

Symptomatic treatment.

Hepatic tests must be carried out at the beginning of treatment and repeated every 24 hours. In most cases hepatic transaminases return to normal in one to two weeks with full return of normal liver function. In very severe cases, however, liver transplantation may be necessary.

INCOMPATIBILITIES:
Paracetamol Infusion should not be mixed with other medicinal products.

CAUTION:
Even invisible damage to bottle caused during transit, storage or handling may result contamination. Do not use, if container is found leaking upon squeezing, contents not clear or contains visible solid particles.
Paracetamol overdose may be injurious to liver.

STORAGE :
Store at a temperature not exceeding 30°C. Do not freeze. Protect from light.

DESCRIPTION:
Paracetamol Infusion tends to exhibit pink color that may intensify over time without adversely affecting potency.

PRESENTATION:
FFS Bottle of 100 ml

Marketed by:

AMERICAN REMEDIES
Care & Cure with Research
American Remedies Healthcare Pvt. Ltd.
(An ISO 9001-2015 Certified Company)

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