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This information is intended for use by health professionals

#### **1.3.1.1. Name of the medicinal product**

Paracetamol injection 1.0g/100ml , IV Infusion Solution.

#### **1.3.1.2. Qualitative and quantitative composition**

Each 100ml contains Paracetamol 1.0g.

#### **1.3.1.3. Pharmaceutical form**

A clear, colourless to slightly yellow Solution for Infusion.

#### **1.3.1.4. Clinical particulars**

##### **1.3.1.4.1 Therapeutic indications**

For the treatment of mild to moderate pain including headache, migraine, neuralgia, toothache, sore throat, period pains, aches and pains, symptomatic relief of rheumatic aches and pains and of influenza, feverishness and feverish colds.

##### **1.3.1.4.2 Posology and method of administration Adults:**

Intramuscular route (I.M.):

Adult : 300mg per 2ml every 4 to 6 hours for adult using.

Children: For children under 3 months, 5mg per kg bodyweight was recommended. For Children aged 3 months to 12 years: 30mg to 200mg every 4 to 6 hours could be chosen to age. If necessary, 4 times per 24 hours can be used.

Intravenous route(I.V.):

Dilute the injection as 1g Paracetamol in 100ml 5% Glucose IV solution for Intravenous infusion.

Adults :Paracetamol 1 g per administration, in one 100 mL vial, up to four times a day. The minimum interval between each administration must be 4 hours in patients without hepatic or renal impairment. In patients with renal and/or hepatic impairment the minimum interval between doses must not be less than 6 hours.

The maximum daily dose from all sources of paracetamol must not exceed 4 g.

**Neonates, infants and children weighing up to 33 kg (about 11 years old)**

15 mg/kg of paracetamol per administration, i.e. 1.5 mL of solution per kg, up to four times a day.

The minimum interval between each administration must be 6 hours.

The maximum daily dose must not exceed 60 mg/kg.

Neonates (< 10 days): it is recommended to reduce the dosage by half, i.e. 7.5 mg/kg paracetamol per administration, without exceeding 4 administrations per day.

**1.3.1.4.3 Contraindications**

Hypersensitivity to paracetamol or any of the constituents.

**1.3.1.4.4 Special warnings and precautions for use**

Care is advised in the administration of paracetamol to patients with severe renal or severe hepatic impairment. The hazards of overdose are greater in those with non-cirrhotic alcoholic liver disease.

Do not take more medicine than the label tells you to. If you do not get better, talk to your doctor.

Contains Paracetamol.

Do not take anything else containing paracetamol while taking this medicine.

Talk to your doctor at once if you take too much of this medicine, even if you feel well. This is because too much paracetamol can cause delayed, serious liver damage.

Patients should be advised that paracetamol may cause severe skin reactions. If a skin reaction such as skin reddening, blisters, or rash occurs, they should stop use and seek medical assistance right away.

**1.3.1.4.5 Interaction with other medicinal products and other forms of interaction Muscle relaxants and ether**

Cholestyramine: The speed of absorption of paracetamol is reduced by cholestyramine. Therefore, the cholestyramine should not be taken within one hour if maximal analgesia is required.

Metoclopramide and Domperidone: The absorption of paracetamol is increased by metoclopramide and domperidone. However, concurrent use need not be avoided.

Warfarin: The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of paracetamol with increased risk of bleeding; occasional doses have no significant effect.

Chloramphenicol: Increased plasma concentration of chloramphenicol

**1.3.1.4.6 Pregnancy and lactation**

Epidemiological studies in human pregnancy have shown no ill effects due to paracetamol used in the recommended dosage, but patients should follow the advice of the doctor regarding its use.

Paracetamol is excreted in breast milk but not in a clinically significant amount. Available published data do not contraindicate breast feeding.

#### **1.3.1.4.7 Effects on ability to drive and use machines**

Caution is advised when driving and using machines in view of the possible undesired effects such as dizziness and vertigo.

#### **1.3.1.4.8 Undesirable effects**

Adverse effects of paracetamol are rare. Very rare cases of serious skin reactions have been reported. There have been reports of blood dyscrasias including thrombocytopenia purpura, methaemoglobinaemia and agranulocytosis, but these were not necessarily causality related to paracetamol.

#### **Reporting of suspected adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard).

#### **1.3.1.4.9 Overdose**

Liver damage is possible in adults who have taken 10g or more of paracetamol. Ingestion of 5g or more of paracetamol may lead to liver damage if the patient has risk factors (see below).

Risk Factors

If the patient

a) Is on long term treatment with carbamazepine, phenobarbitone, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.

Or

b) Regularly consumes ethanol in excess of recommended amounts.

Or

c) Is likely to be glutathione deplete e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

Symptoms

Symptoms of paracetamol overdosage in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain. Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema, and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported.

Management

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention. Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage. Management should be in accordance with established treatment guidelines, see BNF overdose section.

Treatment with activated charcoal should be considered if the overdose has been taken within 1 hour. Plasma paracetamol concentration should be measured at 4 hours or later after ingestion (earlier concentrations are unreliable).

Treatment with N-acetylcysteine may be used up to 24 hours after ingestion of paracetamol however, the maximum protective effect is obtained up to 8 hours post ingestion.

If required the patient should be given intravenous-N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital.

Management of patients who present with serious hepatic dysfunction beyond 24 hours from ingestion should be discussed with the NPIS or a liver unit.

### **1.3.1.5. Pharmacological properties**

#### **1.3.1.5.1 Pharmacodynamic properties**

##### Mechanisms of Action/Effect

Analgesic – the mechanism of analgesic action has not been fully determined. Paracetamol may act predominantly by inhibiting prostaglandin synthesis in the central nervous system (CNS) and to a lesser extent, through a peripheral action by blocking pain-impulse generation.

The peripheral action may also be due to inhibition of prostaglandin synthesis or to inhibition of the synthesis or actions of other substances that sensitise pain receptors to mechanical or chemical stimulation.

Antipyretic – paracetamol probably produces antipyresis by acting centrally on the hypothalamic heat-regulation centre to produce peripheral vasodilation resulting in increased blood flow through the skin, sweating and heat loss. The central action probably involves inhibition of prostaglandin synthesis in the hypothalamus.

#### **1.3.1.5.2 Pharmacokinetic properties Absorption**

##### Absorption and Fate

Paracetamol is readily absorbed from the gastro-intestinal tract with peak plasma concentrations occurring about 30 minutes to 2 hours after ingestion. It is metabolised in the liver and excreted in the urine mainly as the glucuronide and sulfate conjugates. Less than 5% is excreted as unchanged paracetamol. The elimination half-life varies from about 1 to 4 hours. Plasma-protein binding is negligible at usual therapeutic concentrations but increases with increasing concentrations.

A minor hydroxylated metabolite which is usually produced in very small amounts by mixed-function oxidases in the liver and which is usually detoxified by conjugation with liver glutathione may accumulate following paracetamol overdose and cause liver damage.

#### **1.3.1.5.3 Preclinical safety data**

No Data Available

### **1.3.1.6. Pharmaceutical particulars**

#### **1.3.1.6.1 List of excipients**

Sodium chloride, Water for injections

#### **1.3.1.6.2 Incompatibilities**

None known

#### **1.3.1.6.3 Shelf life :**

Three years. After first opening: from the microbiological point of view, the product should be used immediately.

#### **1.3.1.6.4 Special precautions for storage**

Store below 30°C. Do not refrigerate or freeze. Store in the original package in order to protect from light.

For storage conditions after dilution of the medicinal product, see section 6.3.

#### **1.3.1.6.5 Nature and contents of container**

Clear, colourless Type I glass vials with grey chlorobutyl rubber closures and aluminium caps containing 100ml infusion solution.

1 bottle per box

#### **1.3.1.6.6 Special precautions for disposal and other handling**

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

#### **1.3.1.7. Marketing authorisation holder**

Ningbo Voice Biochemic Co., Ltd.

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