

DINOPROSTONE (PG E2)

ACTION and USES

This prostaglandin is used to maintain patency of ductus arteriosus or to open a closing ductus.

DOSAGE

Maintenance of open ductus arteriosus in stable baby: 5 nanograms/kg/MINUTE

To open a closed duct in baby becoming ill: 25 nanograms/kg/MINUTE weaning to 5 nanograms/kg/MINUTE when stable and duct is patent. In some infants, especially if acidotic, a dose of 50 -100nanograms/kg/MINUTE may be required under the direction of a cardiologist or consultant neonatologist.

ADMINISTRATION

By continuous infusion, preferably central access via PICC line.

RECONSTITUTION

Dinoprostone injection is available as a solution 1mg/ml in a 0.75ml ampoule. Therefore reconstitution is not necessary but it has to be diluted further in order to get a suitable dose.

Dinoprostone 1microgram/ML - FIXED CONCENTRATION

Add 0.5 mL of dinoprostone 1mg/mL to a 500ml bag of 5% glucose. Shake well to mix. Withdraw 50ml into a syringe for delivery.

At this concentration 1 microgram/ml the rate of infusion is calculated as:

- 5 nanograms/kg/**MINUTE** = 0.3ml/ **KG**/hr
- 10 nanograms/kg/**MINUTE** = 0.6ml/**KG**/hr

Other compatible diluents

Sodium chloride 0.9% injection

Other units have used glucose 10% and sodium chloride 0.45% as diluents with no reported adverse effect.

INCOMPATIBILITIES

Our policy is to not mix with other drugs or diluents as there are no data to support mixing; deviation from this is a consultant decision.

STORAGE

The diluted solution should be used immediately. The unopened ampoules are stored in the refrigerator.

MONITORING

Monitor oxygenation saturations, respiratory rate and heart rate, core body temperature and BP.

The incidence of adverse effects is dose related. Respiratory depression and apnoea are common in infants less than 2kg. CNS effects such as seizures, pyrexia, irritability and lethargy can occur.

Hypotension, bradycardia, raised WBC counts, transient pyrexia, nausea, vomiting and diarrhoea are expected side effects.

Guidelines for IV medicine administration - Lothian Neonatal Service

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