IBUPROFEN

Trade Name	Pedea (Orphan Europe)
Class	Non-steroidal anti-inflammatory drug
Mechanism of Action	Prostaglandin synthetase inhibitor
Indications	Medical closure of symptomatic patent ductus arteriosus
Contraindications	Duct dependent cardiac lesion Pulmonary hypertension Thrombocytopenia platelets<80 x 10^9/L or active bleeding Renal impairment creatinine > 120 micromol/L oliguria (<0.5ml/kg/hr) NEC suspected or confirmed Sensitivity to ibuprofen Liver disease Significant unconjugated hyperbilirubinaemia
Supplied As	5mg/mL solution for injection in 2mLvials
Dilution	Flush the line with 2mL of 0.9% saline, then, infuse the undiluted drug, then flush the line again **If the dose volume is <0.5mL then will need to further dilute** before infusing via the T34 pump (see T34 protocol)
Dosage	1st dose 10mg/kg – do not give within 6hrs of birth due to risks of PPHN and hypoxia 2nd dose 5mg/kg 3rd dose 5mg/kg This course may be repeated after 48 hours if necessary.
Interval	One dose every 24 hours
Administration	IV infusion over 15 minutes
Compatible With	Sodium chloride 0.9%, sodium chloride 0.45%, dextrose 5%, dextrose 10% and lactated ringers.
Incompatible With	No information available on Y-site compatibilities.
Interactions	Systemic corticosteroids may increase the effects of ibuprofen. Ibuprofen may increase effects of gentamicin, vancomycin, desmopressin, spironolactone Ibuprofen may decrease effects of some drugs including; frusemide, spironolactone, chlorothiazide.
Monitoring	Assess for duct closure with clinical exam and echo. Urine output, electrolytes, creatinine, platelets, bleeding Ibuprofen can displace bilirubin from albumin so monitor SBR

Stability	Administer within 30 minutes of preparation and discard unused portion Use a new vial to draw up each dose
Storage	Store at room temperature and protect from light
Metabolism	Primarily metabolised by hydroxylation, 10 -15% of the dose is excreted renally. Mean half life in premature infants is 43 hrs with large interpatient variability.
Adverse Reactions	Reduced urine output, increased creatinine, platelet dysfunction and bleeding. Severe hypoxia has occurred when given prophylactically within 6hrs of life. Always echo prior to giving ibuprofen to rule out the presence of PPHN. Tachycardia, hypotension, rash, hypocalcaemia, hypoglycaemia, adrenal insufficiency, hypernatraemia
Comments	Ibuprofen appears to have less reduction in urine output, cerebral or mesenteric perfusion than indomethacin. 2021: This product is no longer routinely stocked by wholesalers in NZ.
References	1. BNF for Children 2009 2. Taketomo et al Paediatric Dosage Handbook 2009. 3. Neofax 2009 4. Kidz First / National Womens Protocol 2006 5. Su et al. Arch Dis Child Fetal Neonatal Ed 2008:93;F94-99 6. Gournay et al. Lancet 2004:364;1939-44 7. Overmeire et al. Labcet 2004:364;1945-49 8. Mosca et al. Lancet 2002:360;1023-4.
Updated By	A Lynn, B Robertshawe June 2010 A Lynn, B Robertshawe October 2012 (re-order profile)