

NICU: Ibuprofen

Presentation:	Pedea[®] brand - Solution for injection 5mg/mL, 2mL ampoules								
Indication:	Closure of haemodynamically significant patent ductus arteriosus in preterm new born infants less than 34 weeks of gestational age, after first six hours of life.								
Dose:	<p>Three IV doses 24 hours apart</p> <table border="1"> <thead> <tr> <th>Dose</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>10mg/kg</td> <td>LOADING DOSE ONE dose only followed at 24 hour intervals by:</td> </tr> <tr> <td>5mg/kg</td> <td>every 24 hours for TWO further doses starting 24 hours after loading dose*</td> </tr> </tbody> </table> <p><i>*Caution - see monitoring information</i></p> <p>Contraindications:</p> <table border="1"> <tbody> <tr> <td> <ul style="list-style-type: none"> • Thrombocytopenia (<100 x10⁹/L) • Suspected or confirmed NEC • Active bleeding/coagulation defects • Life threatening infection • Hyperbilirubinaemia </td> <td> <ul style="list-style-type: none"> • PPHN - Ibuprofen may cause or exacerbate pulmonary hypertension • Other congenital heart lesions which may be duct dependent • Anuria or marked oliguria • Significant impairment of renal function </td> </tr> </tbody> </table>	Dose	Frequency	10mg/kg	LOADING DOSE ONE dose only followed at 24 hour intervals by:	5mg/kg	every 24 hours for TWO further doses starting 24 hours after loading dose*	<ul style="list-style-type: none"> • Thrombocytopenia (<100 x10⁹/L) • Suspected or confirmed NEC • Active bleeding/coagulation defects • Life threatening infection • Hyperbilirubinaemia 	<ul style="list-style-type: none"> • PPHN - Ibuprofen may cause or exacerbate pulmonary hypertension • Other congenital heart lesions which may be duct dependent • Anuria or marked oliguria • Significant impairment of renal function
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Route of administration:	Intravenous infusion to be given over 15 minutes using SMART pump**								
Instructions for preparation and administration:	<p>Give undiluted as a short IV infusion.</p> <p>Can further dilute with glucose 5% or sodium chloride 0.9% if injection volume is too small to infuse</p> <p><i>**Administer through SMART pumps using- Neo/Paed-NICU- neonates I-L-Ibuprofen- VTBI- Total time 15mins</i></p>								
Prescribing	<p>Prescribe on paper drug chart as per Trust prescribing policy.</p> <p><u>Calculation example:</u></p> <p>To administer a dose of 10mg/kg of Ibuprofen to a 1.5kg neonate: Dose of Ibuprofen (mg/kg) = 10 (mg) x 1.5 (kg) = 15 mg</p> <p><u>Prescription example:</u> 31 week gestation baby weighing 1.5kg – <i>loading dose</i></p>								

ONCE ONLY & FIRST DOSE URGENT MEDICATIONS									
Prescribed Date	Drug (Approved Name)	Dose	Route	Time to be Given	PRESCRIBER	ADMINISTERED BY			Pha rm.
					Print & Sign	Date	Time	Initial	
20/12 /2019	Ibuprofen	15mg	IV over 15 mins	ASAP	<i>A. Doctor</i>				
<p><u>Directions for administration in this example:</u></p> <p>Three ampoules would be required to ensure enough medication to prime the line (1.3 mL) and to administer the dose (3 mL). Remove overage (1.7 mL in this example). Administer through SMART pump as above. Once VTBI of 3 mL has been infused, flush slowly at entry site.</p> <p><i>Note: Must use neonate's actual working weight to determine dose and volume.</i></p>									
Known compatibility issues	See separate compatibility chart								
Monitoring	<p>Weight, Urine output, U&Es, Platelets, Bilirubin, Gastrointestinal function</p> <p>* If anuria or manifest oliguria occurs after the first or second dose, then the next dose should be withheld until the urine output returns to normal levels.</p> <p>As ibuprofen may decrease the clearance of aminoglycosides e.g. gentamicin, co-administration with ibuprofen should be avoided where possible or if essential ensure strict monitoring of serum levels.</p>								
Additional Comments:	<ul style="list-style-type: none"> Consider second course after 48-72 hours if symptomatic with abnormal heart scan <p>Note: Oral ibuprofen suspension (100mg/5mL) may be used for the treatment of PDA in babies who are tolerating enteral feeds and who do not have IV access (dosing as per IV dosing). There is limited data to support this and a recent Cochrane review concluded that oro-gastric administration of ibuprofen appears as effective as IV administration.</p>								

Note: The contents of this monograph should be read in conjunction with information available in the BNFC and Medusa

References:

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Ohlsson A, Walia R, Shah SS. Ibuprofen for the treatment of patent ductus arteriosus in preterm or low birth weight (or both) infants. Cochrane Database of Systematic Reviews 2020, Issue 2. Art. No.: CD003481. DOI: 10.1002/14651858.CD003481.pub8.

Document control sheet

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