INDOMETACIN

Trade Name	Ductaclose (Samarth)
Class	Non steroidal anti –inflammatory (NSAID)
Mechanism of Action	Reduces cyclo-oxygenase activity and causes decreased prostaglandin synthesis
Indications	Medical closure of symptomatic Patent Ductus Arteriosus (PDA)
Contraindications	Duct dependent cardiac lesion Concomitant steroid use ie: hydrocortisone/dexamethasone Pulmonary hypertension Thrombocytopenia platelets<80 x 10^9/L, or bleeding Renal failure creatinine > 120 micromol/L, or oliguria (<0.5ml/kg/hr) NEC suspected or confirmed Sensitivity to indomethacin
Supplied As	Lyophilized white/yellow powder 1mg / ampoule
Dilution ***Two dilution steps required***	**Chart for 3 doses and fax to Sterile Pharmacy to dilute and make up 3 doses from a single vial** If unable to be drawn up in Sterile Pharmacy

Vial	Water Added	Total Volume	Concentration
1mg	2mL	2mL	**0.5mg/mL**

Then further dilute by taking 1mL (0.5mg) and diluting with 4mL of water to give a **final concentration of 0.1mg/mL**

If the dose volume is <0.5mL then will need to further dilute before infusing via the T34 pump (see T34 protocol)

Dosage	0.2 mg/kg/dose for 3 doses 0.1 mg/kg/dose if creatinine >100micromol/L
Interval	12 hourly SMO discretion to adjust dosage interval to 24 hourly depending on the clinical picture
Administration	IV infusion over 30 minutes

Compatible With	**Solutions:** dextrose 5%, dextrose 10%, sodium chloride 0.9%,water for injection **Terminal Y-site compatibility**: furosemide, insulin, nitroprusside, potassium chloride, sodium bicarbonate
Incompatible With	TPN, calcium gluconate, dopamine, dobutamine, gentamicin, tobramycin.
Monitoring	Monitor urine output, serum electrolytes, creatinine and platelet count, assess for GI or prolonged bleeding. Re-echo after the course to assess response
Stability	Discard unused portion immediately
Storage	Room temperature < 30 ^{o}C - protect from light
Adverse Reactions	Transient renal dysfunction, hyperkalaemia, hypoglycaemia, hyponatraemia, decreased platelet aggregation, anaemia.
Metabolism	Metabolised by liver, excreted by kidneys - Individual variation in t½: 5-90 hours
Comments	If indomethacin causes oliguria, the dosing interval of other renally excreted drugs (eg. gentamicin, vancomycin) may need to be prolonged. Feed intolerance common - may need to withhold feeds. Previously known as Indomet**h**acin
References	1. Trissell Handbook on Injectable Drugs. 10th edition. 2. Waikato Drug manual 1994 3. Neofax online in www.micomedexsolutions.com 4. ADC 1991, 66:55-58 - Prolonged low dose 5. Cochrane Database of Systematic Reviews. Prolonged versus short courses of indomethacin for the treatment of PDA in preterm infants. 2007 Issue 4
Updated By	Dr Peter Schmidt, B Robertshawe October 2004 A Lynn, B Robertshawe December 2007 A Lynn. B Robertshawe, N Austin February 2008 A Lynn, B Robertshawe May 2009 (new pumps), June 2010 A Lynn, B Robertshawe Oct 2012 (re-order profile, 2 dilutions) A Lynn, M Wallenstein, B Robertshawe May 2021 SMO consensus