

Management of patent ductus arteriosus in preterm babies is not a surgical consideration and can be managed conservatively

Wong A. (1), Jain A. (1), Jenkins S. (1), Sheththalli M. (1), Nathan M. (2), Goodwin T. (2), Ariti C. (3), Uzun O. (1)

University Hospital of Wales, Cardiff, Wales, UK. (1); Princess of Wales Hospital, Bridgend, Wales, UK. (2); Public Health, Cardiff University, Cardiff, Wales, UK. (3)

Introduction: Significant left to right shunt across the patent ductus arteriosus (PDA) in preterm babies is associated with higher incidence of intraventricular haemorrhage (IVH), necrotising enterocolitis (NEC) and chronic lung disease (CLD), and longer duration of ventilation. Surgical management has often been recommended as the final option. Although there are wide variations in medical management of PDA, the value of surgical PDA ligation or interventional device closure is not much questioned.

Objectives: This review looks at the clinical outcomes of premature babies with large PDA managed prior to 2014 (the era of surgical/medical intervention) versus conservative management, following a major shift in our practice in South Wales in 2014. New guidelines advocate liberal use of steroid, diuretics & fluid restriction, and limited use of Ibuprofen or Paracetamol.

Methods: Retrospective review of all preterm infants managed in our neonatal unit with a haemodynamically significant PDA. We studied outcomes of PDA, incidence of NEC, CLD, IVH, surgery/intervention and death.

Results:

	Medically treated		Not medically treated	
	Pre 2013	2014-2017	Pre 2013	2014-2017
n	88 (44%)	20 (18%)	113 (56%)	89 (82%)
Median gestation	26/40	25/40	27/40	27/40
Median BW (grams)	850	800	1020	955
Surgery/Cath	33 (37.5%)	1 (5%)	21 (18.5%)	2 (2%)
NEC	14 (15.9%)	6 (30%)	20 (17.6%)	25 (29%)
Death	12 (13.6%)	3 (15%)	13 (11.5%)	9 (10%)

Conclusions: Conservative management of PDA in preterm babies is as effective and results in fewer patients being referred for surgery or intervention without adversely affecting mortality or morbidity. Our study challenges the need for surgery or device closure in the management of preterm PDA.