Background and Aims Emerging evidence suggests, that routine pharmacological or surgical closure of patent ductus arteriosus (PDA) is not beneficial for preterm infants. Information about natural closure of ductus are lacking. Aim of the study was to evaluate untreated preterm infants with PDA.

Methods Retrospective observational study. Very low birth weight infants born during the 18 months period were enrolled. Only babies with severe signs of hemodynamically significant PDA were treated. All patients were followed until closure of PDA (clinically or echocardiographically approved).

Results 195 infants with mean birth weight 1113±690 grams and mean gestation age 28.4±7 weeks were eligible for the study. 22 (12%) died before discharge for morbidities directly unrelated to PDA. 15 patients were treated – 6 with ibuprofen and 8 were ligated. One neonate had residual flow through the PDA after ligation. 62 babies needed PDA ligation. BNP level did not predict severity or early referral for PDA ligation in our study group. We need further study with large sample and randomization to support our study conclusion.

Conclusion Routine treatment of PDA should be abandoned. Chance of spontaneous closure is likely during the first year of corrected age. Cardiological and long term neurological follow up is needed for infants with PDA.

Surgical ligation of patent ductus arteriosus in preterms less than 30 weeks gestation in a tertiary neonatal unit

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Background Patent ductus arteriosus is inversely related to gestational age. It remains a significant morbidity and challenge to manage in extremely preterm babies. Medical therapy reduces the need for surgical ligation.

Aim To audit our management of PDA and the need for surgical ligation.

Methods The Badger database was interrogated for babies less than 30+0 weeks gestation who had a PDA. Their management and outcomes were audited over a 3 year period from 01/04/09 to 31/03/12.

Results In the last 3 years, there were 300 babies less than 30+0 weeks gestation who were admitted to our tertiary neonatal unit. PDA was confirmed on echocardiography in 190 (63%) babies. 72 (38%) babies were treated with Indomethacin (62 complete and 10 incomplete course: 5 renal impairment, 3 thrombocytopenia and 2 NEC). 25 (13%) babies had a surgical ligation of their PDA (The median gestational age at birth was 24 weeks and median birth weight was 725 grams). 13 (52%) babies who underwent ligation, received at least one complete course of Indomethacin. Median age at ligation was 30 days of life. There was no surgical morbidity or mortality from the PDA ligation. 67 babies died and 235 babies were discharged home. 25 babies needed home oxygen of which 21 previously had a significant PDA.

Conclusion Despite medical therapy, there is a small population of extremely preterm babies who have a calcific ductus PDA that need surgical ligation. Early identification with serial echocardiography and proactive management of these babies might improve their respiratory morbidities.