Aim

Age in extremely preterm babies. Medical therapy reduces the need for surgical ligation. It remains a significant morbidity and challenge to manage particularly for infants who are small, have respiratory morbidities, and who need respiratory support.

Methods

Routine treatment of PD is not beneficial for preterm infants. Informations about natural closure of ductus are lacking. Aim of the study was to evaluate the efficacy of medical therapy compared to surgical ligation.

Results

198 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 PD. 13 patients were treated – 6 with ibuprofen and 8 were ligated. One neonate had residual flow through the PD after ligation. 15 (7.5%) have been discharged with PD. From them, 8 had spontaneous closure in the first year of corrected age and 1 in the second year. 6 babies needed PDA ligation. BNP level did not predict severity or early referral for PD ligation in our study group. Need for further study with large sample and randomization to support our study conclusion.

Conclusions

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

SPONTANEOUS CLOSURE OF PATENT DUCTUS ARTERIOSUS IS PRESUMABLE IN VERY LOW BIRTH WEIGHT INFANTS

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Background and Aims

Emerging evidence suggests, that routine pharmacological or surgical closure of patent ductus arteriosus (PDA) is not beneficial for preterm infants. Informations about natural closure of ductus are lacking. Aim of the study was to evaluate the efficacy of medical therapy compared to surgical ligation.

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 needed ligation. All infants were followed until closure of PDA (clinically or echocardiographically approved).

Results

198 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. 13 patients were treated – 6 with ibuprofen and 8 were ligated. One neonate had residual flow through the PD after ligation. 15 (7.5%) have been discharged with PD. From them, 8 had spontaneous closure in the first year of corrected age and 1 in the second year. 6 infants have a small, hemodynamically nonsignificant PDA and are in cardiology follow up.

Conclusions

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 PRETERM INFANTS 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 particularly for infants who are small, have respiratory morbidities, and who need respiratory support.

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 unit. PDA was confirmed on echocardiography in 190 (63%) babies. 72 (38%) babies were treated with Indomethacin (62 complete and 10 incomplete course: 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 50 days of life. There was no surgical morbidity or mortality from the PDA ligation. 67 babies died and 233 babies were discharged home. 25 babies needed home oxygen of which 21 previously had a significant PDA.

Conclusions

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

HYPOXIC PERINATAL CARDIOMYOPATHY-DIAGNOSIS AND EVOLUTION

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Background

Hypoxic perinatal cardiomyopathy and its complications are major causes of morbidity and mortality in the neonatal period. Early diagnosis and intervention are essential for a good long-term outcome.

Methods

Patients 68 newborns aged 0–14 days, normal birth weight, with perinatal hypoxia (Apgar score 3–7), receiving resuscitation, without major congenital heart diseases. All cases: clinical exam, ECG, chest X-ray (R.x.CT), Doppler echocardiography (ECHO). Most of patients were evaluated and after 6 months.

Results

The patients had mainly signs of neurological post hypoxic suffering, 8 cases signs of severe heart injury (cardiogenic, respiratory distress, cyanosis, peripheric hypoperfusion), other cases: systolic murmur (64) and signs of PHN (8). Chest X-ray: cardiomegaly (32), ECG: severe left ventricle (LV) repolarization disturbances and low voltage of QRS complexes (37), without ischemic changes. ECHO at 2–7 days of life: *the absence of severe congenital cardiac anomaly; *permeability of foramen ovale (100%); mild to severe tricuspid insufficiency, RV and RA dilation (29); sometimes right-left shunt through the FO *myocardial hypertrophy (42) mainly IVS (29), signs of PHN (6); increased myocardial performance index (44 cases), the systolic dysfunction (5) and severe LV diastolic dysfunction (45 cases). New evaluation at 6 months showed: reduction of the myocardial hypertrophy and of tricuspid regurgitation, normal LV systolic and diastolic function.

Conclusions

The perinatal hypoxia can induce a important myocardial injury as hypoxic ischemic myocardopathy or transient post hypoxic hypertrophic cardiomyopathy (62.2% of patients), the signs of cardiovascular suffering missing often. Echo is the main method for diagnosis and follow up of perinatal hypoxic cardiomyopathy and is necessary performed from the first week of life.

A REPORT OF TWO CASES OF GLUCOCORTICOID ASSOCIATED CARDIAC DYSFUNCTION IN NOONAN SYNDROME

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Background and Aims

To review the potential exacerbating factors of cardiac function in 2 cases of Noonan syndrome.