

### 1125 EFFICACY OF AN INDIVIDUALIZED STRATEGY FOR THE PHARMACOLOGICAL CLOSURE OF PDA WITH IBUPROFEN IN PRETERM INFANTS: EVALUATION BY ECHOCARDIOGRAPHY

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**Background and Aims** The aim of study is to evaluate the applicability of an individualized strategy for closure of PDA in preterms. We verified the closure rate and consequently the failure of PDA closure, the rate of reopening and the onset of secondary outcomes.

**Methods** We recruited 36 preterms (27 weeks mean GA; mean birth weight 828 g) with PDA and candidates for the pharmacological closure according to the internal protocol.

Using serial ECHOS, we evaluated the persistence of the PDA after the administration of a first dose of ibuprofen, establishing the need to repeat a second or third dose each 24 hours.

**Results** We observed a rate of complete closure of 77.7% (33.3% after the first dose, 30.5% after the second and 13.8% after the third dose).

The incidence of re-opening is 16.6%, without significant difference related to the number of doses ( $p=1$ ).

There was a significant difference in terms of birth weight and GA between patients with persistent PDA (mean BW 485 g and mean GA 24+3) and patients who kept the ductus closed (mean BW 901.4 g and GA 27) ( $p<0.05$ ).

There was no significant difference in terms of incidence of outcomes (IVH, NEC, bronchodysplasia, deaths) comparing to a group which received a standard treatment of 3 doses.

**Conclusion** The individualized strategy allows to expose preterms to a minor amount of doses, without changing the number of closure and outcomes.

However, the extreme GA are associated with an increased risk of failure of closure and reopening.

### 1126 VITAMIN D LEVELS AND MYOCARDIAL FUNCTION IN PRETERM INFANTS

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**Background** Low Vitamin D levels have been linked to cardiac failure in the adults and children. Tissue Doppler Imaging (TDI) is evolving as a superior measure of subtle changes in myocardial contractility in preterm infants. We aimed to correlate Vitamin D levels at birth with TDI measures of systolic and diastolic function.

**Methods** Preterm infants < 32 weeks gestation were recruited. Vitamin D levels were measured at birth and echocardiography was carried out on Day 1. TDI myocardial velocities were recorded using a pulsed wave doppler sample from the lateral left/right ventricular wall & intraventricular septum. Peak systolic (S'), early diastolic (E') and late diastolic (A') velocities were recorded.

**Results** Ten preterm infants with structurally normal hearts were recruited. Mean (SD) gestational age was 28 (1.7) weeks and birth-weight 1.29 (0.3)kg. There was no significant increase in Right ventricular systolic (5.1cm/sec vs 4.8cm/sec) or diastolic myocardial velocity measures (5.2cm/sec vs 5.1cm/sec) or left myocardial velocity systolic (3.7cm/sec vs 3.9cm/sec) or diastolic (4.1cm/sec vs 4.0cm/sec) measures between those with severe Vitamin D deficiency (<30 nmol/L) and those with low normal levels of Vitamin D.

**Conclusion** Neonates with severe Vitamin D deficiency have similar TDI measures of systolic and diastolic velocity to those with near normal levels. In our small cohort severe Vitamin D deficiency appears to cause no impairment in myocardial contractility.

### 1127 MEASURING BLOOD PRESSURE AND MANAGING "HYPOTENSION" IN NEWBORN BABIES: VARIATION IN PRACTICES

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**Background and Aims** Measuring blood pressure (BP) is an important part of cardiovascular assessment in newborns. Although arterial BP is considered as a gold standard, various methods of non-invasive BP measurements are used in clinical practice. The various studies have shown that BP measured by Doppler is better correlated with arterial BP than the oscillometric method. Regardless of definition of "hypotension", there is no agreement on its management strategies.

**The Aim** of this study is to survey the variations in practices in all tertiary neonatal units across England in management of hypotension.

**Methods** A structured questionnaire based telephonic survey.

**Results** The response rate was 100% (45 units surveyed). Forty units (89%) use arterial BP and/or oscillometric method, and only 5 units (11%) use Doppler method. Twenty seven units (60%) have written guidelines on management of hypotension. Forty (90%) units use fluid bolus as the first line management; two units use fresh frozen plasma if the perfusion remains low. Thirty seven units (82%) use dopamine as the first line inotropic agent. Twenty units (45%) keep the umbilical arterial lines for as long as needed but the others keep them for different periods (3–14 days).

There are 9 different makes of oscillometric monitors used, and 10% of the units use different makes in one intensive care area.

**Conclusion** Marked variation remains in management of hypotension in newborn babies. There is a need to formulate evidence based guidelines for management of hypotension and to study the accuracy of non-invasive methods of BP measurement.

### 1128 EVALUATION OF ORAL PROSTAGLANDIN E1 IN MANAGEMENT OF DUCTUS DEPENDENT CONGENITAL HEART DISEASE

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**Introduction** Intravenous prostaglandin E1 (PGE1) infusion is a treatment which effect is proven in ductus dependent congenital heart disease. However, PGE1 is very expensive, needed continuous infusion and its supply is difficult by every center. When its long term use is necessary, these problems become more important.

**Aim** To show whether oral PGE1 could keep the ductus open or not till the supply of intravenous PGE1.

**Method** Ten patients, who were admitted to newborn intensive care unit with the diagnosis of ductus dependent congenital heart disease and received oral PGE1 till the supply of intravenous PGE1, were evaluated.

**Results** It was observed that the PO2 and SO2 levels of patients measured 2 hours after the initiation of oral PGE1 were significantly increased compared to the levels before initiation of PGE1 ( $p<0.05$ ). It was also observed that the PO2 and SO2 levels of patients