

**1118 CONGENITAL HEART DISEASE DISTRIBUTION IN A TERTIARY NEONATAL INTENSIVE CARE UNIT**

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**Background & aim** Congenital heart malformation (CHM) is one of the most frequent and important abnormalities in newborns. In this study we retrospectively analyzed the frequency and distribution of the congenital heart diseases in our NICU.

**Method** Newborns hospitalized in NICU between 2005 and 2011 were retrospectively analyzed. Gestational age, birth weight, consanguinity, type of congenital heart disease extracted from the computerized database. CHMs were classified as follows; left-to-right shunt, obstructive, cyanotic with decreased pulmonary flow, cyanotic with increased pulmonary flow and others.

**Results** A total of 706 newborns were diagnosed as congenital heart disease during 7-year study period among the 7450 admission (9.5%). Consanguinity rate was 22.3% and 30.4% of these were first degree relatives. 42.7%, 17.3%, 13%, 11.6% were left-to-right shunt, obstructive, cyanotic with decreased pulmonary flow, cyanotic with increased pulmonary flow and others, respectively. Most frequent heart malformations were ASD (25.5%), VSD (12.6%), Aortic coarctation (10.8%), PDA (9.5%), TGA (8.8%), pulmonary atresia (8.2%), AVSD (4.1%), hypoplastic left heart (3.8%), pulmonary stenosis (3.1%), TOF (2.5%). 37 % of the newborns had at least one congenital malformation in other organ systems.

**Conclusion** ASD, VSD and aortic coarctation were most common congenital heart disease followed in our NICU.

**1119 EVALUATION OF THE QT INTERVAL IN SMALL FOR GESTATIONAL AGE BABIES**

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The objective of this study was to evaluate the QT interval and the effects of intrauterine malnutrition in small for gestational age babies (SGA). In this study, ECGs were recorded on their postnatal day five. Twenty-two SGA infants and 20 appropriate for gestational age babies (AGA) were evaluated. Heart rate, QT interval, QT interval corrected for heart rate (QTc), QT dispersion (QTD) and QTc dispersion (QTcD) were calculated for all infants.

The mean QT and QTc were 265±47 msec, and 379±45 msec in the small for gestational age babies; whereas in the appropriate for gestational age babies the mean QT and QTc were 254±30 msec, and 367±33 msec ( $p>0.05$ ). QTD was found 37±9 msec and, 30±9 msec in the SGA and AGA babies respectively. QTcD was found as 57±15 msec and, 47±12 msec in the SGA and AGA babies respectively. QTD and QTcD were found to be higher in the small for gestational age babies ( $p<0.05$ ). Significantly negative correlations were detected between the birth weight and QTD and QTcD ( $p<0.05$ ;  $r=-0.380$  and  $-0.360$ , respectively).

The present findings suggest that QTD and QTcD values are significantly increased in SGA babies and it can be show deterioration of ventricular repolarization. Small for gestational age may be associated with an increased risk for the arrhythmia and sudden infant death.

**1120 TISSUE DOPPLER IMAGING QUANTIFIES EARLY CHANGES IN PRETERM MYOCARDIUM**

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**Introduction** Haemodynamic changes occurring during the fetal – neonatal transition may impact on global myocardial function in the first week of life. Tissue Doppler imaging (TDI) offers a novel technique to measure changes in systolic and diastolic function in neonates.

**Aims** To use TDI to assess myocardial function in preterm infants compared to gold standard measures.

**Methods** Preterm infants < 32 weeks gestation were recruited. Echocardiography was carried out by a single observer (KA) using the GE Vivid I, on Day 1, 3–4 and Day 7. Clinical parameters were recorded at time of echocardiogram. Standard M mode echocardiography was used to determine shortening and ejection fraction. Myocardial velocities were obtained using a pulsed wave doppler sample from the lateral mitral/tricuspid annuli and intraventricular septum from an apical four chamber view. Peak systolic (S'), early diastolic (E') and late diastolic (A') velocities were recorded.

**Results** 140 echocardiograms were performed on 60 neonates with structurally normal hearts. Gestational age range-23<sup>+6</sup>-31<sup>+6</sup> weeks. There was a significant increase in heart rate ( $p=0.002$ ) and systolic blood pressure over the 1st week. ( $p=0.001$ ). There was an increase in myocardial velocities across all measurements, with right ventricular early systolic and late diastolic velocities increasing significantly ( $p<0.002$ ). There was a significant increase in the left ventricle late diastolic velocities ( $p=0.036$ ). There was no significant difference in shortening/ejection fraction over the first week.

**Conclusion** TDI offers a reliable measure of myocardial velocities over the first week. Current gold standard measures shortening/ejection fraction showed no significant change in myocardial contractility however TDI demonstrated significant changes in both RV and LV systolic and diastolic velocities.

**1121 AN ALTERNATIVE DRUG (PARACETAMOL) IN THE MANAGEMENT OF PATENT DUCTUS ARTERIOSUS IN IBUPROFEN RESISTANT OR CONTRAINDICATED PRETERM INFANTS**

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**Background and Aim** The aim of this study was to evaluate the efficacy of paracetamol in preterm infants with patent ductus arteriosus (PDA) who failed to respond to ibuprofen treatment and/or for whom treatment with ibuprofen was contraindicated.

**Methods** Preterm infants with PDA who were ibuprofen-resistant and/or for whom ibuprofen treatment was contraindicated were started on paracetamol treatment with parental consent. Paracetamol was administered at a dose of 60 mg/kg/day, in 4 divided doses, for a period of 3–7 days. In the absence of closure of PDA, treatment was extended up to 7 days, after which repeat echocardiographic examination was performed.

**Results** A total of 8 preterm infants were included in the study with a median gestational age of 28.5 weeks (minimum-maximum: 23<sup>4/7</sup>-36<sup>5/7</sup>) and a median birth weight of 995 grams (range 630–2970). The first dose of paracetamol was given after a median of 9.5 days (range 5–27), for a median duration of 5 days (range 3–7). Median PDA diameter was 2.3 (range 2–3.5). Paracetamol resulted in successful closure of PDA in 7 (87.5%) patients, while 1 patient (12.5%) did not respond to treatment.

**Conclusions** To date, our case series is the largest to evaluate the efficacy of paracetamol for the management of PDA. We believe