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 admissions (9.5%). Consanguinity rate was 22.3% and 30.4% of these were detected between the birth weight and QTcD and QTcF respectively. Most frequent heart malformations were ASD (25.5%), VSD and aortic coarctation were most common with an increased risk for the arrhythmia and sudden infant death.

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

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 1, 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+6–31+6 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.

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+1–36+6) and a median birth weight of 995 grams (range 630–3650). 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 2.5–3.5). 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...