congenital heart disease has a low recurrence risk. However, left sided obstructive lesions, e.g. critical AS, have a greater recurrence risk and specific gene abnormalities are well documented. Furthermore, these lesions are more likely to be clinically silent with acute, severe presentation at the time of closure of the ductus. Our experience has demonstrated that the pick-up rate for all infants with a family history of CHD is relatively low and our survey demonstrated that many clinicians are not reviewing patients in a timely manner. We recommend selective screening by postnatal echo of patients with a family history of congenital heart disease in the context of a normal detailed fetal anomaly scan and a normal NIPE examination to include only those infants with a family history of CHD with a high recurrence risk.

**Background**

Heart murmurs are commonly detected at the Newborn Infant Physical Examination (NIPE). Routine use of antenatal and pulse oximetry screening means isolated murmurs are unlikely to be due to missed critical Congenital Heart Disease (CHD). We have developed a local guideline for assessment and follow up of these babies and share our experience of this service.

**Aim**

To assess the outcomes of neonatal heart murmurs detected on routine NIPE and review utilisation of neonatal and PEC (Paediatrician with Expertise in Cardiology) clinics.

**Methods**

All babies with murmurs on NIPE over one year (July 2015–June 2016) were retrospectively identified from the NIPE Smart system. Data was gathered from electronic and paper hospital records. All babies had follow-up outcomes for minimum 6 months. Babies with antenatal CHD diagnosis or having NICU admission were excluded.

**Results**

Out of about 6000 deliveries, 139 patients had murmurs detected (50.4% Male). 96 murmurs were noted at <24 hours of life. 132 babies (95%) had pulse oximetry, of which 3 were abnormal. 134 (96%) had inpatient middle-grade/consultant review. All ECG (5 patients) and CXR (2 patients) were normal.

Five patients had in-patient echocardiograms (three normal and two showed Ventricular Septal Defects (VSD)). 53 patients (41%) had murmur at discharge, of which 51 were referred to neonatal clinic, seen at average 5.5 weeks from discharge. Of these 51 patients, 13 still had murmur in clinic; Five had murmur resolution under neonatal follow-up, three are under neonatal follow-up with persisting murmurs (two had echocardiogram showing small muscular VSDs) and five were referred to PEC clinic. These five patients were seen in PEC clinic on average 11 weeks from referral. Three were discharged following normal echocardiograms, one referred to paediatric cardiology and the 5th remains under PEC follow-up.

**Conclusion**

Most murmurs in neonates with normal pulse-oximetry are innocent, only 4% diagnosed with underlying CHD.

**CXR and ECGs** have little role in the routine investigation of isolated neonatal murmurs. The current department referral pathway is working well with only 10% of referrals to neonatal clinic requiring PEC clinic referral, thus optimising PEC clinic utilisation.