Results There were a significant difference in the levels of HDL (1,2 ± 0,31 mmmol/l to 69 ± 0,01 mmol/l, p < 0,001). In these children were indicated increase level of total cholesterol by LDL fraction to 2,35 ± 0,18 mmol/l. IA was in 2.97times higher in patients with mountainous region to according the control group (2.67 and 0.90). Changes in hemostasiogramme were identificated in 54% children (an increase of activated recalcification time (74,76 ± 5,06 s and 64,76 ± 2,04 s, p < 0.05), an increase of concentration of fibrinogen (17,53 ± 1,63 s and 11,32 ± 0,77 s, p < 0.001). According to our research were higher levels of Antiphospholipid IgM, than IgG (2,73 ± 0,34 to 2,03 ± 0,24, U/ml, p < 0.02), which varies within the reference values, but have different signs with dates of the control group.
Conclusion These dates presented the risk of thrombogenesis, but non significant. The levels of IL-1 and IL -6 were in the range of control values, but have a tendency to decline, according to our data. This fact indicated about the decrease in production of interleukins of child's organism in the mountains region.

PO-0032 URINARY TRACT INFECTION IN CHILDREN AFTER CARDIAC SURGERY: INCIDENCE, RISK FACTORS AND OUTCOME

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Introduction Urinary tract infection (UTI) can prolong hospitalisation, and increase morbidity. Catheter associated UTI (CAUTI) is a major cause of UTI.
Objective To determine the incidence, risk factors, aetiology and outcome of UTI in postoperative cardiac children.
Patients and methods This is retrospective cohort study. All post-operative patients admitted to PCICU during 2012 were included. Patients were divided into: group (1) Patients who developed and group (2) patients who did not develop UTI. The two groups were compared for demographic and other variable predictors for UTI.
Results 413 post-cardiac surgical children were included. Group (1) had 29 patients (7%) all had CAUTI. Foley catheter utilisation ratio was 44%. CAUTI density rate was 18 per 1000 catheter days. Logistic regression analysis demonstrated that risk factors for developing UTI were: duration of Foley (p < 0.002), associated syndrome (p = 0.01) and prolonged PCICU and hospital stay (p < 0.05). Gram-negative were responsible for 63% and Candida for (24%) of the CAUTI. ESBL caused 30% and MDRO caused 10% of our patients CAUTI.
Conclusion Foley catheter duration, presence of syndrome and prolonged PCICU and hospital stay were the main risk factors for CAUTI in postoperative paediatric cardiac patients. Resistant Gram-negative were the main cause for CAUTI with one third of CAUTI cases caused by MDRO or ESBL organisms. The cases with CAUTI were generally sicker and with more morbidity. The study will establish a baseline clinical indicator for monitoring quality improvement and the future measures to minimise CAUTI incidence, and its co-morbidity.

PO-0033 REFERRALS FOR ECHOCARDIOGRAMS IN A DISTRICT GENERAL HOSPITAL – ARE WE ON THE PULSE?

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Background and aims Echocardiograms are a major resource for diagnosing congenital and acquired heart disease. Paediatricians with special expertise in Paediatric Cardiology are now at the forefront of the paediatric cardiac care service. The aim of this audit was to report on the quality of referrals – investigating the indications for referral, documentation of symptoms and signs.
Methods The medical notes of 46 children who attended outpatient echocardiogram clinic were retrospectively reviewed (April to June 2012). We looked at indications for referral, documentation of symptoms and signs in the initial referral letters.
Results 41 out of 46 children attended the clinics, of which 39 sets of notes were available to be reviewed. 22 were new and 17 were follow-ups. The main indications for referral were presence of murmur, family history, congenital heart disease, syndromes and Kawasaki Disease.

16 children were referred because of murmur, 12 of whom were asymptomatic. Half did not comment on grade, position or radiation of the murmur. One-third did not have documentation of femoral pulses, signs of heart failure (crackles on auscultation, hepatomegaly, oedema).
Conclusions Indications for referral to echocardiogram clinic were appropriate. However, the quality of documentation of basic examination findings was poor. This audit starts a discussion regarding setting the standard for quality of referrals to echocardiogram clinic, and highlights deficiencies in documentation. Recommendations include a standardised pro forma and an emphasis during general practice study days.

PO-0034 THE INCREASED SERUM LEVELS OF INTERLEUKIN-21 IN KAWASAKI DISEASE

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Purpose It has been reported that serum level of immunoglobulin E (IgE) is increased in patients with Kawasaki disease (KD) after acute phase. However the exact mechanism of increasing IgE is yet to be revealed. We investigated whether the interleukin-21 (IL-21) could be related with the high IgE in KD. Instead of IL-4, IL-21 was focused in this study because it has been reported that its level is increased in various autoimmune vasculitis.
Methods From June 2008 to June 2010, 49 patients with KD admitted in Wonju Christian Hospital and 13 controls with high fever due to unknown infection who had no history of KD were included in this study. The sera from patients and controls were collected and checked in terms of immunoglobulin E (Chemiluminescent method, Siemens, Munich, Germany) and IL-21 (ELISA, eBioscience, San Diego, USA).
Results The median age of patients with KD was 3 years of age (range: 0.4–10) and that of controls was 7 years of age (range: 1–12). The group of patients with KD was composed of 39 complete KD and 10 incomplete KD. Among patients with KD, 10 patients had coronary arterial dilatation (CAD) and 39 patients had no coronary complications. The median value of IL-21 in patients with KD was significantly increased as 466 pg/mL (range: 0–1544) while that value in controls was <62.5 pg/mL (range: 0- 825 pg/mL) (p < 0.01). We could not find the significant correlation between the serum level of IgE and that of IL-21 in patients with KD (Spearman R=0.2, p = 0.08) though 30% of patients with KD showed increased IgE more than 100 IU/mL. In addition, our data showed no significant difference

between CAD group and non CAD group in terms of serum IL-21.

Conclusion Our data showed firstly that IL-21 is increased in patients with KD. There was no significant correlation between high IgE and the level of IL-21.

PO-0035 PROPRANOLOL ADMINISTRATION FOR TREATMENT OF IMMATURE INFANTILE HAEMANGIOMAS(IIH) IN INFANTS; ANY CARDIAC EFFECTS?

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Introduction Propranolol is now being used as an alternative to steroid treatment for IIH.

Aim of the study

To evaluate the cardiac effects of propranolol in infancy.

Methods All patients with IIH between January 2011–December 2013, treated with propranolol, underwent cardiac examination: heart rate (HR), blood pressure (BP), satO2, electrocardiogram and echocardiography (shortening fraction and ejection fraction). Cardiac evaluation was repeated after 1 week, 4 weeks, and then every 6 months.

Results We have analysed 42 patients divided into 2 groups: 33 patients (1–6 months, mean weight 6.5 ± 1.3 kg) and 9 patients (6–15 months, mean weight 10.6 ± 2.4 kg). No adverse effects in any patients and none required discontinuation of treatment. In the first group the median HR centile was 50th at baseline, 41thafter 1month and 44th at the end of treatment. In the second group the median HR centile was 43th at baseline, 34th after 1 month and 37th at the end of treatment. In the first group the mean SF was 39% at baseline, 40% and 40% at the end of treatment: the mean EF was respectively 74.5%, 72% and 73%. For the second group the mean SF was 38%, 39% and 39%: the mean EF respectively was 73.1% at baseline, 74% after 1 month and 74.2% at the end of treatment.

Conclusion In our study we have observed signs of rapid involution of hemangioma within the 2–3 first weeks of treatment in all patients. All patients have responded well to treatment, with no side effects and especially no cardiac effect.

PO-0036 PROGNOSTIC IMPACT OF PATENT DUCTUS ARTERIOSUS IN PRETERM INFANTS WITH LOW BIRTH WEIGHT

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Patent ductus arteriosus (PDA) remains one of the most common cardiovascular problems in preterm neonates. The aim of this study was to analyse the clinical impact of PDA in preterm infants with low weight.

Methods A total of 81 preterm infants with low birth weight were evaluated. Echocardiographic analysis was used to diagnose PDA, to determine the magnitude of the transductual shunt and to ascertain its haemodynamic significance. The birth weight infant was defined as: extremely low (ELBW) ≤1000 g, very low (VLBW) 1001–1500 g and low weight (LBW) 1501–2000 g.

Results PDA was diagnosed in 29 preterm infants (35.8%), being more frequent in preterm infants with ELBW than VLBW and LBW infants (59.3% vs. 25% vs. 23.8%, p = 0.008). The preterm infants with PDA were characterised by: greater haemodynamic instability 48.3% vs.13.7% [OR 5.86 (95% CI 1.99–17.3, p = 0.001], mechanical ventilation 82.8% vs. 41.2% [OR 6.85 (95% CI 2.25–20.8 p = 0.001], bronchopulmonary dysplasia 17.2% vs. 2% [OR10.4 (95% CI 1.15–94.1,p = 0.013]. There were not significant differences in the presence of intraventricular haemorrhage or necrotizing enterocolitis (24.1% vs. 18%, p = 0.513 and 6.9% vs. 7.8%, p = 0.87, respectively). Mortality was slightly higher in preterm infants with PDA than those with closed ductus, 8 (27.6%) vs. 6 (11.8%), p = 0.073. In the multivariate analysis the PDA was not a predictor of mortality [HR 2.17 (95% CI 0.31–15.2), p = 0.434].

Conclusions In our series, PDA could be to increases neonatal morbidity, increasing the risk of respiratory problems, especially in preterm infants with ELBW.

PO-0037 GROWTH FACTOR AND NATRIURETIC PEPTIDE BIOMARKERS OF DISEASE SEVERITY AND OUTCOME IN CONGENITAL DIAPHRAGMATIC HERNIA

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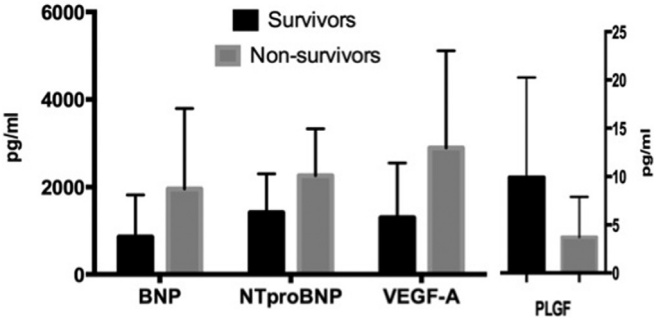
Background and aims In infants with congenital diaphragmatic hernia (CDH) plasma peptides which mediate, or are produced in response to PH and cardiovascular dysfunction may be useful clinical biomarkers of disease status and predictors of outcome. This prospective pilot study investigated patterns of selected candidate plasma peptides in relation to disease severity and outcome in infants with CDH.

Methods In ten consecutive infants with CDH, serial plasma samples for peptide analysis (BNP, NTproBNP, VEGF-A, PLGF) were obtained during intensive care admission at defined time points (max. 5 days apart) up to discharge or death.

Results Analysis was performed on 80 samples. Six subjects survived to discharge (median 24, range 16–52, days); there were two early deaths (at 7 and 9 days) and two late deaths (72 and 160 days). BNP, NTproBNP, and VEGF-A, were higher in non-surviving infants in the first 48 h of life (Figure 1). NTproBNP remained elevated among non-survivors throughout admission



Abstract PO-0037 Figure 1 Biomarker levels in first 48 h of life in surviving and non-surviving infants with CDH