

## Poster abstracts

Children between 8 and 10 years had higher values than younger age groups. Knowledge of interaction between colloid osmotic forces in health and disease can be helpful in diseases associated with fluid imbalance and may be crucial in deciding different fluid treatment options.

**PO-0028** MARKERS OF THE EARLY EXTUBATION AFTER PAEDIATRIC CARDIAC SURGERY

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10.1136/archdischild-2014-307384.706

**Introduction** Despite recent advances in anaesthesia, cardiopulmonary bypass and surgical techniques, children undergoing congenital heart surgery require postoperative mechanical ventilation. Early extubation was defined as ventilation shorter than 12 h.

**Aim** To identify markers associated with successful early extubation after paediatric cardiac surgery.

**Methods** Retrospective-prospective clinical study was performed in Paediatric Clinic and Heart Centre Clinical Centre University of Sarajevo during period from 01.01.2006. till 01.01.2011. Study included 100 children up to 5 years of age with congenital heart disease with left-right shunt and obstructive congenital heart disease. Patients were divided into two groups: I Group-54 patients extubated within 12 h after surgery and Group II-46 patients extubated more than 12 h after surgery.

**Results** The most frequently encountered preoperative variables were age with odds ratio 4% 95% CI(1-7%), Down's syndrome 8,5 95% CI (1,6-43,15), failure to thrive 4,3 95% CI(1-18). Statistically significant postoperative data included lung disease (reactive airways, pneumonia, atelectasis, pneumothorax) and with odds ratio 35,1 95% CI (4-286) and blood transfusion with odds ratio 4,6 95% CI(2-12). Proven markers were age with cut of 21,5 months (sensitivity 74% and specificity 70%) and extracorporeal circulation (ECC) with cut of 45,5 min (sensitivity 71% and specificity 65%).

**Conclusion** Younger age and prolonged time ECC are markers associated with prolonged mechanical ventilation.

**PO-0029** WITHDRAWN

**PO-0030** CASE REPORT: HEPARIN-INDUCED THROMBOCYTOPENIA (HIT) IN TWO CHILDREN AFTER FONTAN PROCEDURE

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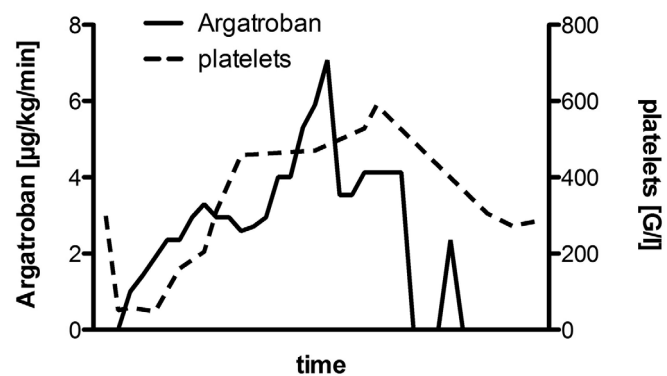
10.1136/archdischild-2014-307384.707

**Background and aims** Incidence of HIT in childhood is lower than in adults because of lower platelet factor 4 levels and immature immune system. After first time cardiac surgery platelet-antibody formation has been reported to be 1,7% in neonates and 6% in children on the 5th postoperative day. With reexposure to unfractionated heparin (UFH) even 52% of children are antibody positive but only 1.3% develop symptoms.<sup>1</sup>

**Methods and results** Two children (3 and 3.5 years old) developed thrombopenia after Fontan procedure (after 5 and 7 days

**Abstract PO-0030 Table 1**

Date	Time	aPTT	Argatroban µg/kg/min	Thrombocyte G/l	INR	Marcoumar mg
29.10.12		27		299		
8.11.12	7:47	35	1	58		
26.11.12	7:00	70	4,13	528	2,67	2
28.11.12	10:00	88	4,13		2,4	2
29.11.12	11:00	>240	Pause		6,56	2
29.11.12	12:00	94	Pause			-
29.11.12	20:50	106	2,36			-
30.11.12	3:12	99	ex		3,9	1.5
2.12.12	8:00				4,4	1



**Abstract PO-0030 Figure 1**

respectively). One patient suffered from cyanosis due to a thrombus in the Fontan tunnel. Both were initially treated with continuous argatroban infusion and then switched to a vitamin K antagonist. In the second patient aPTT and INR exceeded therapeutic values during transition, because argatroban dosage was not reduced adequately. (Table 1)

**Conclusion** In both patients platelet count recovered. No adverse events, especially no argatroban induced bleeding occurred. aPTT and INR should be monitored closely and dosage should be adapted accordingly.

1 Mullen *et al. Anesth Analg.* 2008; 107(2):371-378

2 Niyati *et al. Pediatric Pharmacol Ther.* 2012; 17(1):12-30

**PO-0031** PREFERABLE DISORDERS IN THE CHILDREN WITH PRIMARY ARTERIAL HYPERTENSION ASSOCIATED WITH ENDOTHELIAL DYSFUNCTION

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10.1136/archdischild-2014-307384.708

**Background and aims** Endothelial dysfunction (DE)-a state of the vascular endothelium, which is accompanied by vasotonic, remodeling, anti-inflammatory and anticoagulant functions. The range of these disorders, the severity of each, and chronology of occurrence, the dynamic progression vary depending on the nosology pathology.

**Methods** The investigated group included of 36 children (age - 13,98 ± 0,16) with diagnosed primary arterial hypertension associated with DE. The scientific study was conducted in the Transcarpathian region of Ukraine.

**Results** There were a significant difference in the levels of HDL ( $1,2 \pm 0,31$  mmol/l to  $69 \pm 0,01$  mmol/l,  $p < 0,001$ ). In these children were indicated increase level of total cholesterol by LDL fraction to  $2,35 \pm 0,18$  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 identified in 54% children (an increase of activated recalcification time ( $74,76 \pm 5,06$  s and  $64,76 \pm 2,04$  s,  $p < 0.05$ ), an increase of concentration of fibrinogen ( $17,53 \pm 1,63$  s and  $11,32 \pm 0,77$  s,  $p < 0.001$ ). According to our research were higher levels of Antiphospholipid IgM, than IgG ( $2,73 \pm 0,34$  to  $2,03 \pm 0,24$ , 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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10.1136/archdiscchild-2014-307384.709

**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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10.1136/archdiscchild-2014-307384.710

**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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10.1136/archdiscchild-2014-307384.711

**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



## PO-0031 Preferable Disorders In The Children With Primary Arterial Hypertension Assotiated With Endothelial Dysfunction

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*Arch Dis Child* 2014 99: A260-A261

doi: 10.1136/archdischild-2014-307384.708

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