Conclusions Mediastinitis should also be considered in patients with sternal wound infections after heart surgery. Aggresive surgical and medical treatment is essential.

PO-0021 WITHDRAWN

PO-0022 ASSESSMENT OF CORONARY ARTERY IN A MURINE MODEL OF KAWASAKI DISEASE BY ECHOCARDIOGRAPHY

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10.1136/archdischild-2014-307384.701

Introduction This study sought to assess the changes of coronary artery complications and cardiac function in the murine model of Kawasaki disease (KD) with a high frequency ultrasound system.
Methods Lactobacillus casei cell wall extract (LCWE) was prepared, and injected to C57BL/6 mice intraperitoneally to induce KD. Totally 40 mice were categorised into KD model group and the control group randomly. On days 10, 21 and 60, coronary artery were measured by echocardiography. Left ventricular end-diastolic diameter (LVIDd), end-systolic diameter (LVIDs), ejection fraction (EF), fractional shortening (FS) and blood flow velocity of atrio-ventricular valve during early diastole (E)/atrial contraction (A) were also assessed.
Results Echocardiography detected coronary artery and measured cardiac function in all mice. There was a high density echo images around the coronary artery wall at 10 days and 21 days in the KD group, 4(20%) presented local coronary artery aneurysm at 14 days and 21 days. The diameter of left coronary artery in KD group (0.46 ± 0.11 mm on D10, 0.47 ± 0.09 mm on D21) was larger than controls (0.32 ± 0.14 mm on D 10, 0.36 ± 0.06 mm on D21, all $p < 0.01$). There were no significantly differences in measurement of cardiac function.
Conclusions Coronary artery and cardiac function could be assessed easily by echocardiography in murine model of KD. Murine model of KD established by LCWE was shown similar natural progression on coronary artery abnormalities with KD patient.

PO-0023 WARFARIN AND ASPIRIN COMBINATION THERAPY FOR GIANT CORONARY ARTERIAL ANEURYSM IN KAWASAKI DISEASE

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10.1136/archdischild-2014-307384.702

Introduction This study sought to assess whether warfarin and aspirin combination therapy can prevent cardiovascular events in children with giant coronary artery aneurysm (CAA) caused by Kawasaki disease.
Method Children with giant CAA secondary to Kawasaki disease in our hospital were included. They were randomly divided into warfarin group (warfarin + aspirin) and control group (aspirin only). The dose of warfarin was adjusted by INR (1.5–2.0). Follow-up time included 2nd week, 1st month, 3rd month, 6th month and every 6 months afterward. Clinical data and complications were recorded.
Result Sixty-five children were included with age of 3 months to 13 years. CAA most commonly occurs in right coronary artery, then left anterior descending, and main trunk. Left circumflex artery is rarely affected. CAA in 17 cases (53.1%) retracted in warfarin group, 5(41.7%)in controls. During follow-up, 2 children (6.3%) presented with intracoronary thromboses in warfarin group, 3 (25%) in controls. One case in warfarin group suffered myocardial infarction, 3 (25%) in control. Two children in control group died, while none in warfarin group. Coronary artery stenosis occurred in 2 children (16.7%) in controls, while one in warfarin group. Bleeding event occurred in 9 children including 1 with subarachnoid haemorrhage in warfarin group while only in 3 in the controls.
Conclusion Warfarin therapy could decrease the risk of thrombosis, myocardial infarction and mortality. Minor bleeding event is common and need to be monitored.

PO-0024 CLINICAL COURSE FEATURES OF NEWBORNS WITH CONGENITAL HEART DEFECTS: 15 YEARS' EXPERIENCE OF OUR CENTRE

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10.1136/archdischild-2014-307384.703

Aim A retrospective cohort study was made as well as a comparative analysis of the medical and surgery results of newborns with congenital heart defects (CHD).
Materials 2440 newborns (median: 8 days [IQR:2–18 days], 3.25 kg [IQR:0,85–6,5 kg]) underwent surgical repair in the Bakoulev SCCVS between 1999 and 2013. At the time of corrective surgery 1104 (51%) patients were up to 7 days old with critical CHD (median:2,9 kg [IQR:0,85–5,1 kg]). Among them 526(48%) were 1 day old. All newborns were divided into two groups by the number of surgical repairs performed per year: group 1-up to 100 patients (1999–2004,n = 305), and group 2–more than 100 patients (2005–2013,n = 2135). The survival analysis was made according to Kaplan and Meier method (K-M).
Results The CHD range was primarily represented by aortic obstructive lesions (622–25,5%), transposition complexes (488–20%), tetralogy of Fallot complexes (193–7,9%), critical pulmonary stenosis/atresia with intact septum (183–7,5%) and others. 47% undergone complete repair of CHD. The following risk factors (n = 6) for increased post-operative mortality by multivariate analysis (p = 0.0001) were identified. Progressive deteriorate on of the surgical results survival increased with number of risk factors, regardless of their combination (ROC-curve: AUS=0.8073, K-M p = 0.00001). 22 diagnostic/treatment strategies of critical neonates with CHD were developed. Over a period of study the capacity of surgery care was expanded (p.001), including complete repair CHD (42% vs 49%,p = 0.01). Morbidity of critical neonates decreased in both preoperative (21% vs 0,01% p = 0.0002) and postoperative period (K-M p = 0.000001). Actuarial survival rate was improved both for

neonates undergoing palliative surgery (p = 0.0003) and complete repair (p = 0.000001).

PO-0025 WITHDRAWN

PO-0026 ECHOCARDIOGRAPHIC ASSESSMENT OF CORONARY ARTERIES USING HIGH RESOLUTION TRANSTHORACIC ECHOCARDIOGRAPHY IN PATIENTS WITH A PREVIOUS DIAGNOSIS OF KAWASAKI DISEASE

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10.1136/archdischild-2014-307384.704

Background and aim Kawasaki disease (KD) is a generalised systemic vasculitis of unknown aetiology involving medium and small size blood vessels, particularly the coronary arteries, in which a progressive stenosis may result from active remodelling with an intimal proliferation and neoangiogenesis. The aim of our study was to assess if subjects with a previous diagnosis of KD show, after several years, a coronary intimal thickening, suggestive of a persistent cardiovascular risk, by using high-resolution transthoracic echocardiography (HRTE).

Methods We conducted an observational cross-sectional case-control double-blind study on 21 patients with a previous diagnosis of KD who had been hospitalised, as children, since January 1990 to December 1999 in our Paediatric Department of the University of Catania, Italy. We performed colordoppler-echocardiography in all patients assessing measurement of thickening, inner diameter and outer diameter of proximal portion of left coronary artery using HRTE.

The cardiologic data were compared with those of the 21 healthy subjects of the same age.

Results We found a significant intimal thickening in patients with previous KD compared to healthy controls (3.9 mm ± 2.4 mm vs 1.8 mm ± 0.6 mm $p < 0.05$). In particular, we noticed that also subjects not suffering from coronary impairment in acute phase have higher values of thickening than healthy controls, configuring a higher cardiovascular risk.

Conclusions We concluded that the assessment of coronary artery thickening by means of HRTE may become an essential instrument to evaluate late cardiovascular risk in subjects with a diagnosis of KD in childhood.

PO-0027 INTERSTITIAL FLUID COLLOID OSMOTIC PRESSURE IN HEALTHY CHILDREN

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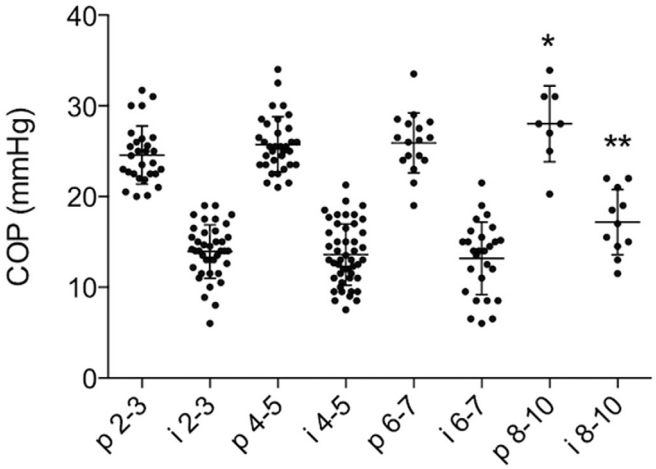
10.1136/archdischild-2014-307384.705

Background and aims Colloid osmotic pressure (COP) of plasma and interstitial fluid play important roles in transvascular fluid exchange were small pressure alterations may result in fluid shifts into or out of the capillaries optimising homeostasis. This study was conducted to determine reference values of COP in healthy children, and to evaluate the methodology of harvesting interstitial fluid.

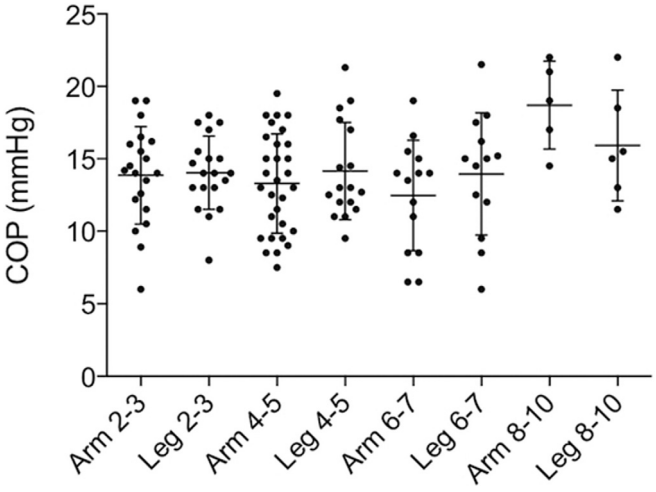


Abstract PO-0027 Figure 1 Colloid osmotic pressure in plasma and interstitium. Colloid osmotic pressure in plasma (p) and interstitium (i) (arm and leg merged) related to age. There was significant difference in pressure beween 2–3 years and 8–10 years for plasma ($p < 0.05$, *) and between first three age groups and 8–10 years ($p < 0.01$, **) in interstitial fluid

Methods COP in plasma and interstitial fluid isolated from nylon wicks implanted subcutaneously was measured in 99 healthy children from 2 to 10 years of age. Patients were sedated and intubated during wick implantation in arm and leg, and COP was analysed in a colloid osmometer.

Results Mean plasma COP in all children was 25.6 ± 3.3 mmHg. Arbitrary division of children in age groups, showed no significant difference in plasma or interstitial fluid COP values for patients less than 8 years, whereas patients of 8–10 years had significant higher COP both in plasma and interstitial fluid. There was no gender difference or correlation between COP in interstitial fluid sampled from arm and leg and no significant effect on interstitial COP of gravity. Prolonged implantation time did not affect interstitial COP.

Conclusions This study justifies the presumption that plasma and interstitial COP in healthy children are similar to adults.



Abstract PO-0027 Figure 2 Colloid osmotic pressure in arm and leg. Colloid osmotic pressure from wicks after implantation in arm vs. leg related to age. There was no significant difference in the pressures obtained in arm and leg