In the intensive care, Mg⁺⁺ levels in group I, 0.74 (± 0.25) mmol/L was greater than group II 0.40 (± 0.06) mmol/L. Only 1 child out of 25 (4%) in Group I, had junctional tachycardia, while 5 out of 25 children in group II (20%) had junctional (4/25-16%) and 1 child had supraventricular tachycardia (4%).

Conclusions: Serum Mg⁺⁺ levels are low preoperatively in neonates/infants undergoing the arterial switch operation, Mg⁺⁺ supplementation helps in reducing postoperative arrhythmias in these children.

611

PATTERN OF LIFE THREATENING CONGENITAL HEART DISEASES - EXPERIENCE FROM 2 DISTRICT GENERAL HOSPITALS IN UK

V. Gali, R. Sathanantharajah, S. Sivakumar

Neonatal Unit, Birmingham City Hospital, Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, UK

Aim: To look at pattern, clinical presentation and initial management of life threatening congenital heart defects.

Methods: Retrospective audit focused on diagnosis and initial management of babies who presented with life threatening congenital heart diseases to 2 district general hospitals in UK from March 2007 to July 2009.

Results: 30 babies with life threatening congenital heart defects were identified. 30% were suspected antenatally. 80% presented within few hours after birth with cyanosis. 40% had murmurs. Diagnosis was confirmed in 29 by urgent echocardiogram performed by a paediatrician with expertise in cardiology and in 1 antenatally suspected case at cardiac centre. Most frequent defects were: Transposition of great arteries (including complex) 11, Hypoplastic left heart syndrome 3; Truncus Arteriosus 3; Pulmonary Atresia 2; Total Anomalous Pulmonary Venous Connection 2, Tetralogy of Fallot 2; and Congenitally Corrected TGA with other defects 2; Other defects (n=1) were Double outlet right ventricle with Ventricular Septal Defect (VSD), Coarctation of aorta, Critical pulmonary stenosis, Complete AVSD and Large VSD. 19 of 20 babies with duct dependent lesions were managed immediately with prostaglandin infusion and all 6 cases with cardiac failure treated with diuretics. 2 sick babies underwent life saving balloon septostomy in these

hospitals performed by outreach cardiac team. 30 day mortality was 16%.

Conclusion: These were complex, critical and most commonly cyanotic heart diseases, majority undetected antenatally. Commencing prostaglandin is crucial in suspected duct dependent lesions. Routine post-natal pulse-oximetry and facility to have echocardiography in district general hospitals help in appropriate management.

612

MYOCARDIAL PERFORMANCE INDEX (TEI INDEX) IN TERM NEONATES-PRELIMINARY STUDY

R. Bokiniec¹, P. Własienko², J. Szymkiewicz-Dangel², M.K. Kornacka¹

¹Neonatal and Intensive Care, ²Perinatal Cardiology Unit, Warsaw Medical University, Warsaw, Poland

Background: To define age-related changes in left and right ventricular function using myocardial performance index (Tei Index) in healthy term newborn infants.

Materials and methods: 9 newborn infants were selected from normal full-term healthy neonates with gestational age 38-42 weeks, mean birth weight 3572 g (min. 2870, max. 4160 g). The Tei Index is a Doppler myocardial performance tool which can be used to evaluate of systolic and diastolic function. The first measurement was taken as soon as possible after birth, the second one was taken on day 3 of life.

Results: The higher Tei index were obtained in the right ventricle (mean value - 0,44; SD $\pm 0,11$) then the left ventricle (mean value - 0,31; SD $\pm 0,07$) in the first day of life. In the left ventricle the Tei index were converted during the first three days of life (from mean value 0,31 to 0,37), and we observed the conversion in the right ventricle too between the first and the third day of life (mean value 0,44- day 1 to 0,26 -day 3).

Conclusion: In neonates, the diastolic and systolic function of the right ventricle were higher than those measured in the left ventricle during the first day of life and this ratio changing in the third day of life. Higher mean value Tei index in the right ventricle might be reflecting the "persistent" fetal status of this ventricle in the first day of life. Further investigations