

EP11.05 Appraisal of cardiac function and pulmonary hemodynamic in infants with Down syndrome

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Introduction: There is a lack of longitudinal data related to the development of cardiopulmonary hemodynamic in infants with Down Syndrome (DS) beyond infancy. We assumed that babies with DS, regardless of the occurrence of congenital heart disease (CHD), reveal biventricular systolic and diastolic injury and persistent increase of pulmonary pressures in relation to controls over the 2 years of age.

Methods 78 infants with DS (42 with CHD and 36 without CHD) and 57 controls carried out in 2 tertiary neonatal intensive care departments at the Obstetric hospital : Koco Glozheni” in Tirana Albania participated in our study. This is a observational cohort study hels in 20023 in Tirana, Albania. All infants took serial echocardiograms at birth, 6 months, 1 year, and 2 years of age to evaluate biventricular systolic and diastolic function. Pulmonary vascular resistance was evaluated using pulmonary artery acceleration time.

Results *Participants with DS showed smaller LV (birth: 23 ± 3 vs 34 ± 1 mm) ; 2 years: (46 ± 4 vs 42 ± 2 mm)and right ventricular (birth: 26 ± 2 vs 30 ± 3 mm) 2 years: 38 ± 3 vs 47 ± 2 mm). Pulmonary artery acceleration time was lower in the DS group the whole time of the study period (birth: 42 ± 8 vs 62 ± 12); 2 years 69 ± 10 vs 80 ± 10 ms). No discrepancies were noticed among DS infants with and without CHD.*

Conclusions *:Infants with DS show damaged maturational alterations in myocardial function and pulmonary vascular resistance. These findings offer valuable approaches into the path-physiology influencing cardio respiratory morbidity in this population.*

