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ROUTINE SCREENING ULTRASOUND IN CHILDREN WITH CLEFT PALATE AND / OR LIP: A SINGLE CENTER EXPERIENCE

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Introduction

Cleft lip and palate deformities can occur as part of a complex congenital malformation syndrome, especially involving midline structural anomalies in the brain, the heart and the abdomen. Incidence of these associations are variably reported in literature.

Objectives

This study aims to evaluate the incidence of these associated congenital anomalies according to routine ultrasound screening program for cleft palate and/or lip deformities in a single regional tertiary center.

Methodology

All infants at our center with cleft deformities were prospectively recruited for routine screening echocardiogram and ultrasound of the central nervous system and the urinary system. The types of cleft deformity, the results of the screening ultrasound, related clinical symptoms and interventions from January 2009 to December 2013 were studied.

Result

225 children were recruited. Overall 12% were syndromic. 94 (42%) children had cleft palate only, of these 23 (24%) were syndromic. 82 (36%) children had cleft lip and palate, 4 (4.8%) of whom were syndromic. 49 (22%) were of ‘lip only’, only one of

them (2%) was syndromic. 20 (9%) presented with initial heart failure or abnormal cardiac murmur, 8 of these being ‘palate only’. 205 screening echocardiograms were performed in (91%) asymptomatic children, 4 (2%) were abnormal: One thickened interventricular septum with cleft palate and Pierre-Robin sequence, one ventricular septal defect with cleft palate and Di-George Syndrome, one pulmonary valve stenosis that required valvuloplasty, one ventricular septal defect that required heart-failure medications. 192 screening ultrasounds of the central nervous system and the urinary system were performed in (85%) asymptomatic children. Only two were abnormal (1%): one cross renal ectopia with Klippel Feil syndrome, one intra-spinal lipoma with Goldenhar Syndrome. A median follow-up of 2.5 years in this cohort did not manifest any other significant anomalies in the heart, brain and urinary systems. Cleft deformities that are of ‘lip only’, without syndromic features, and without signs or symptoms of systemic conditions are at very low risk of other associated midline structural anomalies. In resource limited settings, routine ultrasound screening of the heart, the central nervous system and the urinary system may not be essential in these cases.