Early nutrition including foetal period in children with critical congenital heart defects (CCHD) plays crucial role in their long-term growth.

Eva Klaskova, Alzbeta Palatova, Sabina Kapralova, Dpt. od Pediatrics, Faculty Hospital and Faculty of Medicine and Dentistry, University of Palacky, Olomouc, the Czech Republic

Introduction

Growth failure in neonates and infants with CCHDs may negatively influence their life-long neurodevelopmental outcomes. Aims of study was to estimate growth parameters in the paediatric population in whom surgery was necessary in the first year of the life.

Methods

Study group consisted of fifty non-syndromic children with CCHDs as follows: ventricular septal defect (34 %), pulmonary stenosis or atresia (16 %), coarctation of the aorta (18 %), tetralogy of Fallot (10 %), transposition of great arteries (10 %), others (12 %). Anthropometrical data from medical records were retrospectively collected at the birth and age of 6 mths, 3 and 5 yrs. Using the growth charts for the Czech population from The National Institute of Public Health, the patients' z-scores for height, weight and body mass index were calculated. The stunting was set as z-score for BMI < -2; growth failure as z-score for the height < -2.

Results

The prevalence of stunting was 17 % at the birth, 21 % at 6 mths, 37 % at 1 yr, 8 % at 3 yrs and 4 % at 5 yrs of age. The prevalence of the growth failure was 17 % at the birth, 11 % at 6 mths, 13 % at 1 yr, 16 % at 3 yrs and 25 % at 5 yrs of age.

Conclusion

This study suggests a high prevalence of significant malnutrition in infants with CCHDs during the first year of life and increased risk of impaired growth in their later life.

Supported by Ministry of Health, Czech Republic – conceptual development of research organisation (FNOL, 0098892).