Factors related to growth of the infants with structural birth defects in Galle, Sri Lanka

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ABSTRACT

Introduction and objectives:

Birth defects in children is a significant public health problem. Birth defects are known to adversely affect the growth of the infants. This study was carried out to assess the growth and factors related to impaired growth of infants with structural birth defects.

Methods:

Three hundred and fifteen (n=315) infants with structural birth defects (without genetic syndromes) from Galle district were prospectively followed up for a period of one year Their growth at the age of 12 months was assessed. The growth charts in the Child Health Development Record of Sri Lankan children were used as the references. Data analysis was done using SPSS version 20. Descriptive statistics and univariate and multivariate analysis were performed to identify the factors associated with impaired growth. Significant level was set as $p<0.05$.

Results:

Two hundred and sixty eight infants (85%) were alive at the age of one year. One hundred and fifty nine (n=159, 59.3%) were males, 44(16.4%) were preterm and 77(28.7%) had low birth weight. The majority (58.6%) had cardiovascular defects followed by defects involving multiple systems (21.6%). The prevalence of normal growth, underweight, stunting, wasting and both stunting and wasting by the age of one year were 72.4%, 3.0%, 8.2%, 9.0% and 7.5% respectively. Low birth weight (OR=3.6, 95% CI= 1.8-7.4), presence of developmental delay (OR=3.1, 95% CI= 1.4-6.8) presence of three or more birth defects (OR=3.4, 95%CI= 1.2-10.0) and presence of infection requiring in hospital management (OR=3.9, 95%CI= 1.6-9.2) were the independent associates for growth impairment among infants with structural birth defects.

Conclusions:

A significant proportion of infants with structural birth defects have growth impairment. Special attention should be paid by the caregivers and the healthcare workers on the nutrition and growth of the infants with structural birth defects from the date of diagnosis.

KEY WORDS

Structural birth defects, growth impairment, underweight, stunting, wasting