Nutritional status of children with heart disease at the Komfo Anokye Teaching Hospital, Ghana

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Background

Undernutrition is associated with forty-five percent of all deaths in children under-five years. Irrespective of the type of heart disease (HD), malnutrition remains a constant phenomenon in children with both congenital and acquired HD. To minimize the long-term effect of malnutrition in a cohort of patients who have very limited chance of surgical treatment even when indicated, their nutritional statuses must be assessed periodically, and rehabilitation instituted early. The objective of this study was to assess the nutritional status of children attending the Pediatric Heart Disease clinic of the Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana.

Methods

A retrospective review of children up to fourteen years, enrolled into the Pediatric Heart Disease clinic with confirmed HD from November 2020 to June 2021 were systematically recruited. Their ages, weights, heights and mid-upper arm circumferences (MUAC) were measured by standardized methods to assess their nutritional status. Subsequently, their Weight-for-Height (WFH), Height-for-Age (HfA), Weight-for-Age (WfA), Body Mass Index-for-Age (BfA) and MUAC-for-Age (MfA) z-scores were determined based on the WHO Child Growth Standards (2006). Z-scores less than -2 standard deviations (SDs) or greater than +2SDs were considered abnormal. Data was collected and analyzed using Epidata and R statistical software respectively.

Results

A hundred and sixty-seven patient were recruited with 86 (51.5%) being females. The median age was 56 months (Range: 1 to 172). The mean z-score for the WfH was -1.21 (95%CI: -1.48 to -0.94), HfA -1.18 (95%CI: -1.44 to -0.93), WfA -1.81 (95%CI: -2.06 to -1.56), BfA -1.41 (95%CI: -1.61 to -1.21) and MfA -1.66 (95%CI: -1.87 to -1.46). None of the patients had a z-score greater than +2SD for all anthropometric methods determined. The percentage of children with z-scores less than -2SD for WfH was 20.5% (95%CI: 12.0 to 31.6), HfA 21.3% (95%CI: 14.4 to 29.6), WfA 41.5% (95%CI: 33.1 to 50.3), BfA 31.1% (95%CI: 23.1 to 40.2) and MfA 36.0% (95%CI: 28.6 to 44.0).

Conclusion

There is a high prevalence of malnutrition, wasting and stunting among children attending the Pediatric Heart Disease clinic at KATH. Strategies should be put in place to improve their nutritional status, which in turn could improve surgical and long-term developmental outcome.

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