Abstract

Aims: This study evaluated the agreement of growth charts proposed by the National Center for Health Statistics (NCHS/1977), Centers for Disease Control and Prevention (CDC/2000) and World Health Organization (WHO/2006). Methods: Were assessed children between 0 and 5 years old, hospitalized in the pediatric wards of a Brazilian school hospital. Z-score indexes: stature/age (S/A), weight/age (W/A) and weight/stature (W/S) was evaluated, in each of the three references (NCHS, CDC and WHO). ANOVA and test Bland & Altman and Lin plots were used in the comparison of the 3 charts. The agreement of the nutritional state categories was also evaluated, through kappa coefficient. The study was approved by the Institution’s Research Ethics Committee. Results: The study analyzed 337 children, whose median age was 0.52 (IQR: 0.21-1.65) years, 65.3% of them were below 1 year old, 60.2% were male and 50% hospitalized due to acute respiratory disease. Lower Z-scores of W/A and S/A were obtained with the WHO charts and lower W/S with the CDC chart. High correlation and agreement were observed among the criteria, but more patients were classified as presenting shortness through the WHO criteria. CDC and WHO criteria were more rigorous than the NCHS criteria for the diagnosis of underweight (W/A) and malnutrition (W/S). Conclusion: Despite the strong agreement of the 3 charts, the adoption of the WHO charts seems to be more helpful for the children’s nutritional screening for admission, as it enables to detect a higher number of malnourished children or at nutritional risk, who will benefit from an early intervention.

Keywords

Children’s growth, Growth charts, Hospitalized child, Malnutrition, Hospital.