C4.

Nutritional status of children aged 1-5 years in Chavakachcheri Medical Officer of Health (MOH) Area

Kandeepan, K, Balakumar, S. and Arasaratnam, V.

Department of Biochemistry, Faculty of Medicine, University of Jaffna

Nutrition intervention is a sensitive indicator and important throughout life, the ante-natal and early childhood phases are more important. The objective of this study is to determine the prevalence of malnutrition and to investigate the associated factors for malnutrition among the children aged 1 to 5 years in Chavakachcheri MOH area of Jaffna district. Multistage cluster sampling was used to identify a sample that represents the children aged 1 to 5 years. Children (n=73) were recruited in this study between March to September 2010 from one primary sampling unit of Chavakachcheri. To assess the nutritional status anthropometrically, height, weight, Head Circumference (HC) and Mid Upper Arm Circumference (MUAC) were measured. Information regarding households including socio-economic status and breast-feeding patterns were recorded by using pre and post corded questionnaires. General examination of the children was carried out to detect anemia, pallor and Goiter. Concentration of haemoglobin (Hb), serum albumin and serum ferritin were analysed to detect the iron deficiency anaemia (IDA) and protein deficiency. Urinary iodine concentration was measured to detect the iodine deficiency status (IDS). Weight, height, HC, MUAC and age were used to calculate weight-for-age Z score (WAZ), height-for-age Z score (HAZ), weight-for-height Z score (WHZ), HC-for-age Z score (HCAZ), MUAC-for-age Z score (MUACAZ) by using WHO Anthro v.3.0.1 software. Associated factors for malnutrition were derived by using SPSS version 16 software. Of the total of 73 children, forty three (59%) were males. Of these children, 31.5% were underweighted, 21.9% were wasted, 20.5% were stunted and 1.4 % were overweighed. Among the children, 20.0% had less HC-for-age, and 47.9% had less MUAC-for-age. Among the 73 children, 15.0% were affected by both wasting and underweight whereas, 1.4% was affected by wasting and stunting, 6.8% was affected by underweight and stunting and 2.7% was affected by wasting, underweight and stunting. Micronutrient malnutrition, namely IDA (27.8%) and IDS (21.9%), were highly prevalent. Protein deficiency was observed in 47.9% of children and mean serum albumin concentration was 3.6 mg/dL (±0.7). Of these children 31.9% of children were affected with anemia, 27.8% of children were affected with IDA and 21.9% of children were affected with Urinary iodine deficiency. No case of goiter was detected. Of these children, 68.5 % of children fed with Exclusive Breast Feeding, while 2.7% of mothers did not feed the babies with beast milk and 28.8 % of mothers did not exclusively breast feed their babies. Based on our findings, under nutrition, protein deficiency and micronutrient deficiencies are prominent among the children living in Chavakachcheri MOH area.

Key words: Malnutrition, Underweight, Wasting, Stunting, anaemia, Anthropometry