PROBLEMS OF NUTRITIONAL STATUS IN CHILDREN WITH DISABILITIES

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BACKROUND

Nutrition problems are common in children with neurological impairment [1]. In Ukraine, as one of low income and middle-income countries (LMICs), PEM is detected and diagnosed not quite actively especially in children with neurologic impairment. Some recent publications demonstrate actuality and research of this problem in other countries such as Bosnia and Herzegovina, Nigeria and Ghana [2].

OBJECTIVES

Assessment of nutritional status and nutritional support in children with congenital malformations of brain.

METHODS

A single-center observational descriptive cross-sectional study was performed. The anthropometric assessment of the children, evaluation of oromotor dysfunction (OMD), a 24-hr dietary recall, assessment of nutritional status before ("baseline") and after 6 months of implementing of food modification ("endline") were studied. There were 9 (53%) young children (0-36 months) and 8 (47%) pre-schoolers (3-6 years). The average age was 3.6±2.1 years.

RESULTS

There were 14/17 children with paralytic syndromes (I-V level of GMFCS). Severe cognitive impairment was established in 8/17. Prevalence of OMD was in total sample and was distributed as "mild" in 2/17 children, "moderate" in 4/17 and "severe" in 11/17 children. Severe OMD is associated with microcephaly, cognitive impairment and V level of GMFCS. The results of caregivers' answers for questionnaire demonstrated that all children had meals alone without any social component, regularly, minimum 4 times, maximum 6 times per day. None of them applied any special feeding formula. The meals length in 4 tube fed children was even less than 15 min. The 24-hr dietary recall demonstrated that only 3 children (younger than 1 year) received formula for feeding, others - "adult" meal (porridges, vegetables, milk and meat, pureed by texture modifications for consistency). All children were unable to feed themselves and needed some feeding assistance. The moderate PEM was diagnosed in 2/17 children, severe PEM in 12/17 from the total cohort in "baseline" study. The distribution of PEM degree in "endline" was following moderate PEM was found in 5/17 children, severe PEM in 9/17. We found a significant difference in changes of Z-score BW for age in children under NS during 6 mo "baseline" and "endline" (median -6.2 vs -5.4) (*W* test p=0.0208) and no significant difference in changes of Z-score H/L for age in children under NS during 6 mo "baseline" and "endline" (median -3.4 vs -3.4) (*W* test p=1.0).

CONCLUSIONS

The study demonstrated moderate and severe nutritional disorders in young children and pre-schoolers with congenital malformations of brain: Z-score BW for age in total cohort was -3.2, H/L for age was -2.7 in LMICs. The importance of drawing up individual plans for the energetic consumption of the children with congenital malformations of brain with training of caregivers and rehabilitative and palliative team was shown. High-quality clinical trials are needed to better comprehend the methodology of nutritive support in children of any age with different neurological impairments.

REFERENCES

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