

Introduction. The trend of increasing the number of foreign students in recent years poses teachers tasks that will improve the quality of students training and, as a consequence, will raise the rating of the university on the international arena. The multinational composition of students originating mainly from African countries (Nigeria, Zambia, Morocco, Kenya) and Asia (India) and interstate differences in guidelines of integrated management of patients with certain diseases dictates the need to adapt teaching methodology of individual pediatric topics on IV course, particularly, "protein-energy malnutrition in children."

According to the World Health Organization in 2011 up to 70% of children suffering from malnutrition live in Asia and Africa. At the same time 2.2 million children die each year from malnutrition. Mortality rates in wasting are 20-30%, in kwashiorkor – 50-60%.

Objective: To show the teaching peculiarities of topic "Protein-energy malnutrition" to English-speaking students on IV course based on the study of differences existing in protocols and guidelines of different countries.

Materials: the protocol Ministry of Health of Ukraine №149 from 20.03.2008 "Medical surveillance of healthy children under 3 years of age", the report of Ministry of Health of Ukraine № 9 from 10 January 2005 "Treatment of malnourished children», The National Guideline for Integrated Management of Acute malnutrition: Kenia (2009), ACF-In Guidelines for the integrated management of SAM (2011), Guideline: updates on the management of severe acute malnutrition in infants and children (WHO, 2013), Integrated Management of Acute Malnutrition Guidelines (Ministry of Health of Uganda republic, 2010).

Firstly it is rational to discuss terminological differences. Thus term "protein-energy malnutrition" is no longer used in American, African and WHO protocols as it is not thought that protein or energy deficiency, are the usual causes of severe acute malnutrition. Under nutrition is a "catch-all" term for a deficiency of any of the essential nutrients (protein, essential fatty acids, electrolytes, minerals and vitamins) or energy. It not only encompasses stunting, wasting (type II deficiency) but also clinical

illness brought about by deficiencies of any of the specific essential nutrients which may not be associated with any anthropometric change (and can occur in obese people). Under weight – indicates when a child has a low weight for his/her age. Acute malnutrition involve wasting (occurs when a person has lost weight and become excessively thin) and kwashiorkor (a clinical syndrome characterised by bilateral oedema. It is often also associated with lesions of the skin, fatty liver, atrophy of the organs and mental changes).

In Ukrainian protocols physical development assessment is based on antropometric measurements of weight, height, calculation of body mass index, weight / height ratio, but MUAC (Mid-Upper Arm Circumference) is not used. The other way, admission criteria in WHO, Kenia, India guidelines to determine in-patient or out-patient care are based in particular on MUAC (Mid-Upper Arm Circumference) and W/H (weight-to-height) ratio values, as well as on presence of bilateral oedema, medical complications, results of appetite test, suitable and willing caregiver. In addition, the classification of malnutrition according to the protocol Ministry of Health of Ukraine № 9 in 2005 takes into account the percentage of weight deficiency, which is not applied in foreign protocols that require exclusion of this issue from the plan of topic preparation of foreign students.

Patients without complications and with good appetite may go directly for out-patient treatment. It is important to conduct an Appetite Test which is not used by Ukrainian pediatricians; therefore, we consider it appropriate to include a question about the appetite test in the theoretical part of the lesson plan for foreign students. The management of severe acute malnutrition in the in-patient setting is divided into three phases: Phase 1, Transition Phase and Phase 2, which are conducted according to 10 steps: correction of Hypoglycemia, Hypothermia, Dehydration, Electrolytes disturbances, Infection prevention or treatment, Micronutrients replenishment, Cautious feeding, Catch-up growth, Sensory stimulation, Prepare for follow-up.

Differences of malnutrition management in Europe, Africa and America from Ukrainian protocols are: availability of ready to use therapeutic products (RUTF) that

does not require cooking, with the fixed content of proteins, fats, carbohydrates and calories, as well as the presence of clear indications and steps in the treatment of severe and moderate malnutrition. RUTF are approved by the World Health Organization. They are produced in some African countries such as Nigeria, Congo, and Ethiopia. The introduction of RUTF optimize the treatment of malnutrition. Basic information on the products can be found on the website <http://www.nutriset.fr/en/homepage-nutriset.html>, which is given to foreign students on faculty pediatrics department for information.

In the current Ukrainian protocol there is no differentiation on in-patient, outpatient treatment, detailed algorithm is absent. The protocol contains information that is not used in English literature and documents, for example, the calculation of the required quantity of fats, proteins, carbohydrates when treating malnutrition. It is also necessary to take into account the absence of drugs Oralit, Regidron etc.abroad.

The above differences disharmonized the methodical preparation of the topic to international students. Therefore, the preparation of the topic "protein-energy malnutrition" it is necessary to optimize the learning process by adapting European and African protocols and compiling them according to the test and situational tasks for students of international faculty.

Conclusion. When preparing the topic "protein-energy malnutrition in children" for foreign students of IV course, special attention should be paid to the terminology, including changing the topic name; on clinical features of kwashiorkor and wasting, their differential diagnosis; methodology of performing the appetite test. A clear formulation of admission and discharge indications must be covered. In the treatment part of the lesson students should master the 10 malnutrition treatment steps, phases of treatment in the hospital and out-patient departments; classification of RUTF, basic products (F75, F100, PlumpyNut, Resomal). Clinical part of the classes should be added with procedure of Mid-Upper arm circumference measurement.