

ABSTRACT

Acute leukemia is defined as a heterogeneous group of malignant hematopoietic stem cell disorders. The aim of this study was to investigate the extent to which nutritional disorders occur in patients with acute leukemia during the cancer treatment, their severity, the most common causes of weight loss, and the extent to which different forms of nutritional intervention are applied in patients.

The research was carried out in the Institute of Haematology and Blood Transfusion, during the hospitalization of patients in the inpatient ward, intensive care unit and transplant unit. The study population consisted of 40 patients diagnosed with acute leukemia. Outcomes from nutritional status screening (MNA questionnaire, BMI, weight, mid arm circumference, calf circumference, BIA, biochemical nutritional parameters), and functional assessment (ECOG PS, Chair-stand test, Hand grip test) were used to process the practical part and answer the research questions. Measurements were performed twice with approximately one month intervals.

The study confirmed weight loss since the onset of the disease in 95 % of patients. The dominant cause of weight loss was identified in 80 % as lack of appetite. Nutritional screening by MNA evaluated the patient population with a mean score of $22,8 \pm 2,9$, referring to the risk zone of malnutrition. Patients experienced impaired physical performance and decreased physical activity. The mean outcome measures did not confirm significant changes in overall nutritional status. Nutritional intervention was used by 97,5 % of patients during treatment.

The study was conducted on a small sample of patients. Patients were followed for a relatively short period of time compared to the duration of the treatment protocol. Further research is needed on a larger cohort of patients to follow the changes of nutritional status during the complete treatment of the disease.

Keywords: acute leukemia, chemotherapy, malnutrition, nutritional status, nutritional screening, nutritional intervention