ABSTRACT

Hematooncological diseases are often accompanied by dietary restriction, especially in cytotoxic therapy. The main purpose of the work was to assess the effect of high-dose chemotherapy on the change of nutritional status in two groups of hematooncological patients. A total of 16 patients were enrolled. Changes of the body composition were evaluated using bioelectrical impedance analysis supplemented by monitoring of biochemical nutritional indicators.

Observations showed that in both groups the majority lost weight. In the first group of eight patients with acute myeloid leukemia observed during three consecutive hospitalizations, the median of change of body weight was -3.7 kg (-4.3%). Loss of lean body mass with a median value of -4.8 kg (-7.2%) was detected at all patients. Body fat was reduced at half of the patients. In some cases, with length of observation, there was an increase in fat mass along with visceral fat. In the second group, which included eight patients (after autologous hematopoietic stem cell transplantation) at whom one hospitalization was evaluated, body weight was reduced at six patients. The medianof change of body weight was -2.1 kg (-2.3%). At five patients, the treatment representeda loss of active metabolic mass. The change of the weight of the lean body mass was shown by the median -1.5 kg (-3.0%). Body fat was reduced at more than half of the patients.

The obtained results indicate that in most cases, high-dose chemotherapy results in weight loss. However, it cannot be said that weight loss or skeletal muscle loss always occurs at all patients, as each patient has been shown to be very specific with a different response to the disease and its treatment. Losses of active metabolic mass involving skeletal muscle suggest.

Key words: hematooncological diseases, high-dose chemotherapy, acute myeloid leukemia, nutritional status, bioelectrical impedance analysis, body composition, skeletal muscle mass, body fat, visceral fat, biochemical nutritional indicators.