Abstract

Introduction: Graft versus host disease (GVHD) is a serious medical complication following allogeneic hematopoietic cell transplantation (allo HSCT). It causes immunodeficiency and several organ damage and decreases survival time at two years after a transplantation. A nutritional intervention should be applied just before the transplantation, because a nutritional status significantly influences the post-transplant complications. A risk of malnutrition or metabolic syndrome can be assessed by several markers. A combination of laboratory, anthropometric, biometric and physical data is suitable for this purpose. In addition, a subjective questionnaire regarding eating habits and physical activity of the patients can be used.

Objectives: This thesis deals with the patients with chronic GVHD (cGVHD) following the allo HSCT. The objective was to describe a nutritional status of the patients, to find out in which way a long-term immunosuppressive treatment affects a body composition and to describe the eating habits and the physical activity of these patients.

Methods: 31 patients with GVHD and 24 patients after allo HSCT without GVHD participated in the research. A body composition (using bioelectrical impedance) and selected laboratory parameters in patients were assessed. A subjective health condition, physical activity (type and frequency) and eating habits of the patients were described using a questionnaire. The research was conducted at Institute of Hematology and Blood Transfusion in Prague and at 4th Department of Internal Medicine of the General Teaching Hospital in Prague.

Results: The research showed that patients with GVHD have higher BMI, body weight, body fat and lower total body water. Such patients have higher risk of overweight, obesity and their complications including metabolic syndrome. GVHD limits the physical activity in the 68 % of patients and they feel subjectively worse. The food consumption is not significantly limited by the disease, just 10 % of patients have lowered food intake as a consequence of GVHD while 61 % of patients have no such complications.

Conclusion: The objective of the thesis was achieved, the changes of the body composition and laboratory parameters in patients with and without GVHD were described. Also, the subjective health condition, physical activity and eating habits in patients with GVHD were evaluated.

Keywords: bioelectrical impedance, phase angle, eating habits, body composition