

## Body changes and gastrointestinal symptoms during hematopoietic stem cell transplantation and its correlations

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**BACKGROUND:** Hematopoietic stem cell transplantation (HSCT) is a type of therapy to restore bone marrow function. During treatment may occur acute and late complications, influenced by several factors. These complications can be presented by mucositis, nausea, vomiting and diarrhea and may occur within 2-3 weeks after HSCT, due to toxicity of treatment. During this period energy requirements can increase up to 150% and oral intake is often unsatisfactory and this can influence the nutritional status of patients. Individuals with nutritional status compromised has higher risk of infection, failed engraftment and lower survival. In this way, it is important a nutritional assessment in different stages of HSCT to identify individuals in nutritional risk, enabling early intervention. The aim of this work is to compare the body composition before and after HSCT and correlate with clinical symptoms during treatment. **HYPOTHESIS:** Identify body changes and gastrointestinal symptoms that occurred during transplantation and how these parameters can be correlated. **METHODS:** The population studied consists of individuals of both sexes with hematologic malignancies. These patients were undergoing to HSCT at University Hospital in São Paulo. This study was observational, longitudinal, monitored in two stages: Pre-transplantation (T0) and after 2-3 weeks of transplantation (T1). During T0 and T1 was realized an anthropometric evaluation (weight, height, arm circumference and triceps skinfold thickness) and body composition analysis by bioelectrical impedance (BIA) in order to get the phase angle. The results were analyzed by SPSS 22.0 software with a significance level of  $p < .05$ . **RESULTS:** From May to November 2016 were performed eleven transplants in the unit of study, five patients were excluded of data collection. The six patients analysed presented a predominance of male patients (66.6%) and mean age was 36 (18-62) years. It was observed majority of caucasians (66.6%). Regarding the type of transplant performed and diagnosis, occurred a predominance of allogeneic transplantation (66.6%) and leukemias (66.6%), respectively. All patients have had gastrointestinal symptoms during the transplant period, highlighting the presence of vomiting, mucositis, and loss of appetite (83.3%), followed by nausea (66.6%) and diarrhea (50%). Anthropometric data obtained along the segment have showed a significant reduction in body weight ( $\chi^2=30.00$ ;  $p<.001$ ), arm circumference ( $\chi^2=24.00$ ;  $p<.004$ ), triceps skinfold thickness ( $\chi^2=18.73$ ;  $p<.001$ ) and body mass index ( $\chi^2=24.00$ ;  $p<.003$ ), however reduction obtained for the phase angle was not significant. A significant interaction was found between weight and nausea ( $p<.05$ ), and mucositis ( $p<.005$ ) and bloating ( $p<.05$ ). It was also found a significant interaction between triceps skinfold thickness and diarrhea ( $p<.05$ ).