

Bioelectrical Impedance Analysis in patients undergoing Hematopoietic Stem Cell Transplantation

Barban, JB., (Hospital Israelita Albert Einstein, Brazil), Tanaka, M, (Hospital Israelita Albert Einstein, Brazil), Barrère, APN (Hospital Israelita Albert Einstein, Brazil), Lucio, F, (Hospital Israelita Albert Einstein, Brazil), Nabarrete, JM, (Hospital Israelita Albert Einstein, Brazil), Piovacari, SMF (Hospital Israelita Albert Einstein, Brazil), Hamerschlak, N (Hospital Israelita Albert Einstein, Brazil), Pereira, AZ (Hospital Israelita Albert Einstein, Brazil).

BACKGROUND: The Bioelectrical Impedance Analysis (BIA) estimates the phase angle, fat and lean body mass. The test itself is inexpensive, easy to use, readily reproducible and appropriate for ambulatory and bedridden patients. Low phase angle by BIA, is associated with increased morbidity and nutritional risk. The nutritional status of patients undergoing Hematopoietic stem cell transplantation (HSCT) is a prognostic indicator of this procedure. The protein-energy malnutrition and obesity increase the risk of comorbidities, mortality, and length of use of immunosuppressive drugs.

HYPOTHESIS: Study and correlate lean body mass, fat mas and phase angle in patients undergoing the HSCT.

METHODS: It was performed a retrospective study, from May 2015 to January 2016, in 38 patients undergoing HSCT. The said study took place at the Hematology-Oncology and Bone Marrow Transplantation Center of the Albert Einstein Hospital in São Paulo, Brazil. All patients were submitted to bioimpedance analysis prior to HSCT, and the data was analyzed using the SPSS program.

RESULTS: The study observed 21 elderly patients (>55y) and 17 adults patients (<55y). In this pool, 52,6% were female and 47,4 male, having a mean age of $55,2 \pm 14,3$ years, lean body mass of $71,1 \pm 7,9$ %, fat mass of $28,9 \pm 7,9$ % and phase angle of $5,6 \pm 1,02^\circ$. The bioimpedance test did not show sarcopenia in patients. Moreover, a negative correlation between years and phase angle ($r_p=0,5$) was observed. In addition, the study presented a significant association between phase angle and elderly ($p<0,05$). Finally, no significant difference among lean mass, fat mass, and survival was observed.