ELDERLY PATIENTS UNDERGONE HEMATOPOIETIC STEM CELL TRANSPLANTATION: BODY COMPOSITION AND ENGRAFTMENT

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BACKGROUND

Hematopoietic Stem Cell Transplantation (HSCT) in elderly is a brand-new issue. Changes in body composition after HSCT have been the subject of previous studies, however there aren’t many studies in elderly people. Objectives: To evaluate muscle thickness and visceral fat by US; % muscle mass, % fat mass and phase angle by BIA. To correlate body composition with engraftment(EN).

RESULTS

Most patients were men (75%) with a mean age of 64(±5,0 years). We had 50% of autologous HSCT and 50% allogenic HSCT. The mean time EN was 13(±4 days). In the baseline, weight was 80(±17 kg), RFQ was 1.8(±0.3 cm) and the VF was 5,5(±2,0 cm); %MM was 68,5(±11); %FM was 27,5(±7,5); PA was 5,3((±0,7). After EN, weight was 73(±13kg). RFQ was 1.5(±0.3cm) and the VF was 5,0(±2.2cm); %MM was 55,5(±20,5); %FM was 25(±7,0); PA was 7,4(±0,8). There wasn’t significant difference between baseline and after engraftment, although all measurements had reduced in all patients, exception for PA and VF had increased. We found the negative correlation between engraftment and RFQ(rp: -0,6), independently of HSCT type by regression. (r_p: -0,6)

METHODS

In this prospective study, we evaluated 16 HSCT patients (≥60years) at Hospital Israelita Albert Einstein, São Paulo, Brazil, on their first day of hospitalization, before HSCT and after the EN. The thickness of the right femoral quadriceps muscle (RFQ), measured at 6 cm from the top edge of the patella was measured using ultrasound (US) in B-mode, transversal plane. The visceral fat(VF) was measured in the abdominal region, by the thickness of the fat layer between the linea alba and the anterior wall of the aorta. The % muscle mass (MM), % fat mass(FM) and phase angle(PA) were evaluated by Bioimpedanciometry(BIA).

CONCLUSION

In this cohort of patients, muscle thickness and mass was reduced, and visceral fat and phase angle was increased after engraftment. The higher muscle thickness correlated faster engraftment.