

FACTORS ASSOCIATED WITH SARCOPENIA IN PATIENTS WITH COLORECTAL CANCER

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INTRODUCTION

Sarcopenia are frequently observed in cancer patients and associated with poor survival. We aimed to compare the nutritional status and clinic parameters in patients with colorectal cancer with sarcopenia and without sarcopenia and to assess the factors associated with sarcopenia.

METHODS

This is an ongoing study including 121 colorectal cancer patients (age: 59 ±12 years; 56% men). Sarcopenia was defined as concurrent low muscle mass and handgrip strength (HGS). The skeletal muscle mass index (SMI) was assessed by computed tomography (CT) at third lumbar vertebra with cutoffs: men < 43 cm²/m² for BMI < 25 kg/m² and < 53 cm²/m² for BMI ≥ 25 kg/m²; women < 41 cm²/m² (Martin et al, 2013). Low HGS was defined as the lowest 20th percentile of the sample according to gender: male < 28.8 kg and female < 18 kg. The phase angle (bioelectrical impedance analysis), serum albumin (SAIb), muscle attenuation (CT), patient-generated subjective global assessment (PG-SGA) were evaluated. Differences between groups were analyzed using chi-square test, student t test or Mann-Whitney's test as appropriate. The variables associated with sarcopenia in the univariate analysis were tested in a logistic regression analysis adjusted for gender and age.

RESULTS

Patients with sarcopenia had lower BMI, PA and MA compared with patients without sarcopenia. The variables that remained in the logistic regression model as significant determinants of sarcopenia (P<0.05), after adjustments for gender and age were BMI < 25 kg/m² (r= -0.27); MA (r= -0.16) and PA (r= -1.55).

	Sarcopenia (n=14; 12%)	Without Sarcopenia (n=107; 88%)	p
Male (n;%)	7; 50%	60; 56%	0.7
Age (years)	65 ± 10	59 ± 12	0.07
BMI (kg/m ²)	24 ± 5	28 ± 6	0.02
PA (°)	4.8 ± 0.5	5.8 ± 0.9	<0.01
SAIb (g/dL)	4.1 ± 0.3	4.4 ± 0.4	0.06
PG-SGA score	4 (3; 10)	3 (1; 6)	0.2
Malnourished (PG-SGA) (n;%)	7; 50%	35; 33%	0.2
MA (HU)	32 ± 8	37 ± 8	0.02
Cancer stage 0-II (n / %)	5; 36%	25; 23%	0.3
Cancer stage III/IV (n / %)	9; 64%	81; 76%	

BMI: body mass index; PA: phase angle; Salb: serum albumin; PG-SGA: patient generated subjective global assessment; MA: muscle attenuation.

CONCLUSION

The nutritional status of patients with sarcopenia was worse than that without sarcopenia. Lower body mass index, muscle attenuation and phase angle were significantly associated with sarcopenia.

REFERENCE

Martin L, Birdsell L, Macdonald N, Reiman T, Clandinin MT, McCargar LJ, et al. Cancer cachexia in the age of obesity: skeletal muscle depletion is a powerful prognostic factor, independent of body mass index. *J Clin Oncol* 2013;31(12):1539-47.