Nutritional status and survival in elderly patients with colorectal cancer

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Introduction: Ageing cancer patients have an increased risk of mortality and are at higher risk of morbidity associated with treatment compared to younger patients. Although the weight loss varies according to the type of tumor, gastrointestinal tumors have a high prevalence because they can impair the intake and absorption of food and nutrients causing malnutrition. The aim of this study was to evaluate the survival time of patients over sixty years of age, with colorectal cancer (CRC), from the first nutritional assessment to death, considering the body mass index (BMI), the Patient-Generated Subjective Global Assessment (PG-SGA) and phase angle (PA).

Methods: Patients and methods: A cohort study was conducted in 250 outpatients with CRC treated by the Oncology Group of the Gastroenterology Division, Federal University of Sao Paulo from July 2008 to September 2015. Clinical or pathological stage, BMI, PG-SGA and PA was determined for all the patients at the first assessment. Survival analysis was performed using the Kaplan-Meier method and significant differences were analyzed with log rank test. Univariate and multivariate Cox relative risk was done for evaluate the risk of death.

Results: Among the 250 CRC patients, 51.6% were males, aged 60–94 years, with a mean age of 70.9 ± 7.49 years, 71 (28.4%) were in neo adjuvant or palliative treatment (Group 1) and 179 (71.6%) were in follow-up or in adjuvant chemotherapy (Group 2). At the time of the analysis 73 (29.2%) had expired and 177 (70.8%) were censored. According to the tumor stage, 130 patients had stage I/II (52%), 64 stage III (25.6%) and 56 stage IV (22.4%). The PG-SGA scores of all the patients ranged from 1 to 24, with the mean value of 5.66 ± 4.67. According to the PG-SGA, 60.4% had a PG-SGA A and do not need intervention, 35.2% needed nutritional support (PG-SGA B) and 4.4% needed nutrition support urgently (PG-SGA C). 46.8% of the patients were smokers and 13.6% alcoholics. The median of BMI were 24.9 kg/m² (16-43), 17.2% were undernourished, 56% normal and 26.8% overweight. The mean of PA was 4.94 ± 1 (for men 5.15 ± 1.08 and for women 4.72 ± 0.92). Differences were significant for PG-SGA, tumor stage and PA among the groups (p < 0.001), but not for BMI (p = 0.459). Univariate Cox proportional hazard regression was undertaken to verify the predictive value of the proposed scores. The differences were significant for tumor stage, ECOG, PG-SGA and PA. Multivariate Cox found that Stage IV was associated with a relative risk of 4.7 (95% CI 3.4–6.3, p = 0.001) compared to Stage I/II. Severely malnourished (PG-SGA C) was associated with a relative risk of 12.04 (95% CI: 3.43–42.19, p > 0.001) as compared to well-nourished status (PG-SGA A). PA>5 was associated with a best prognosis, a relative risk of 0.456 (95% CI:0.263-0.792, p < 0.005).

Conclusion: Our study demonstrated that lower PG-SGA and PA may influence negatively the prognosis of elderly patients with colorectal cancer.