

Sarcopenia is a Predictive Factor for Postoperative Morbidity and Mortality in Patients Having Radical Gastrectomy for Cancer

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Abstract

Introduction: Patients with gastric cancer are frequently malnourished with 30% to 38% of them losing more than 10% of their weight in preceding six months. Sarcopenia represents a decrease in the skeletal muscle mass and function and is usually associated with the aging process. The prevalence of sarcopenia in patients with gastric cancer is reported to be as high as 57.7%. Although many studies support the negative impact of sarcopenia in patients with gastric cancer, contradictory results are also present in the literature. The objective of this study is to investigate if sarcopenia is correlated with increased morbidity and mortality, in patients with gastric adenocarcinoma.

Methods: We studied retrospectively all patients having radical resection for gastric adenocarcinoma managed in the Emergency Hospital of Bucharest between December 2014 and May 2016. ImageJ software was used to measure the patients' body composition. We identified the L3 landmark and extracted that corresponding single cross-sectional image contained within a CT study.

Results: We reviewed 89 patients who had gastrectomy for cancer, but 11 Computed Tomography images were not available for analysis. Therefore, the study group consisted of 78 patients of which 50 were (64.1%) males and 28 (35.9%) females. The average age of patients diagnosed with gastric cancer was 67.7 years (range 22 to 92 years). The primary tumor location was the middle third of the stomach in 45 patients (57.7%), and the second in the lower third of the stomach in 29 patients (37.2%). There were 72 (92.3%) patients who were living on discharge, with mortality in 6 (7.7%) patients. 72.22% of patients are sarcopenic, and 27.78% were non-sarcopenic. The average sarcopenia value for both males and females is 43.77. The greatest number of patients had a skeletal muscle index between 40.00 and 45.00. The second greatest is between 35.00 and 40.00. The muscular skeletal index correlated with the age of the patients. The overall complications rate and the surgical site infection rate correlated with the sarcopenia.

Conclusions: Sarcopenia is highly prevalent in patients having surgery for gastric cancer in Romania and correlates with increased postoperative morbidity. Especially with the increased trend for neoadjuvant therapy, the multidisciplinary team should evaluate and address sarcopenia through the perioperative period.

Key words: sarcopenia, obesity, gastrectomy, gastric cancer, postoperative morbidity