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Pre-operative Hypoalbuminemia in Colorectal Cancer Patients Undergoing Elective Surgery – A Major Risk Factor for Postoperative Outcome

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Abstract

Background: The incidence of hypoalbuminemia in surgical patients varies in different studies with age, tumor stage, time interval to the first referral to a doctor, symptoms of disease and nutritional habits of the population. The main objective of this study was to evaluate the incidence of hypoalbuminemia in colorectal cancer patients undergoing scheduled surgery in an academic hospital in Romania and the impact of hypo-albuminemia on perioperative outcome. The secondary objective was to identify other possible risk factors for the postoperative outcome.

Material and Methods: 252 patients undergoing scheduled colorectal surgery with anastomosis have been enrolled in the study. Incidence of hypoalbuminemia (serum albumin 3.5 < g/dL), fistulas and other postoperative complications (e.g. infections) has been evaluated. LOS and 30-days mortality have also been evaluated comparatively in patients with normal and low serum albumin.

Results: 28.9% of our patients were hypoalbuminemic. The incidence of fistulas was 5.5 % in the study group and 2.3% and 13.3% in patients with normal serum albumin and hypo-albuminemic patients, respectively (p=0.001). Multivariate analysis showed that the OR was 6.65 [95% CI:2.01-21.96] in patients with moderate hypoalbuminemia and 24.75 [95% CI: 6.75-90.67] in patients with severe hypoalbuminemia. Association between alcohol consumption and smoking increased risk ratio to 1.96 [95% CI: 0.51-7.46].

Conclusion: The high incidence of hypoalbuminemia in our patients justifies preoperative nutritional interventions and specific surgical protocols in emergency cases. Further studies are needed to exactly quantify the impact of smoking and alcohol consumption on postoperative outcome.

Key words: colorectal cancer, hypoalbuminemia, surgery, fistulas

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