Results of surgical treatment of colon cancer with implementation of a multimodal enhanced recovery program

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Introduction: Colorectal cancer remains to be one of the most worldwide spread malignancy. In Ukraine it tends to occupy first place in oncological morbidity among adults. More than 70% of patients are presented with stage I-III and require curative surgery. However, severe postoperative complications occur in 20-30% of cases, requiring a multimodal approach program for improving overall treatment results.

Methods: A randomized multi-center study was provided with 280 patients included. Main group (MG) (115 patients) received curative surgery for colon cancer with implementation of a multimodal enhanced recovery program, control group 1 (CG1) and control group 2 (CG2) with conventional approach. Overall recovery period, postoperative morbidity and mortality were assessed.

Results: There were no significant differences between anthropometrical parameters, tumor site, stage and type of surgery. Overall postoperative complications rate for MG, CG1 and CG2 was 10 (8.7%), 16 (20%) and 15 (18%), overall mortality – 1 (0.9%), 5 (6.25%) and 1 (1.2%) respectively. Relative risk for developing postoperative complications for CG1 and CG2 patients was 2.198 (95% CI 1.122-4.305). Overall recovery period after surgery for MG, CG1 and CG2 was 6.3 ± 3.4, 18.4 ± 8.7 and 15 ± 7 days respectively.

Conclusion: Applying a multimodal enhanced recovery approach program in surgical treatment of patients with colonic cancer reduces overall rate of postoperative morbidity and overall recovery period. Conventional care patients had increased relative risk of developing postoperative complications. In our study the influence on postoperative mortality was unconvincing.