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The Impact of Minimally Invasive Surgery in Patients with Colorectal Cancer and Type 2 Diabetes Mellitus

Nicoleta Leopa[1], Mihaela Pundiche[1,2], Cristina Dan[1], Teodor Ștefan Nițu[1,2], Stefan Paitici[3], Andreea Badea[2], Alina Doina Nicoară[2,4], Răzvan Cătălin Popescu[1,2]
[1]Department of General Surgery, Emergency Hospital of Constanța, Romania
[2]Ovidius University, Faculty of Medicine and Pharmacy Constanța, Romania
[3]Department of General Surgery, Emergency Hospital of Craiova, Romania
[4]Department of Internal Medicine, Emergency Hospital of Constanța, Romania

Abstract
Background: Laparoscopic surgery is now widely recognized as a very safe and effective standard treatment for colorectal cancer as compared with laparotomy. Diabetes causes significant mortality and morbidity in the general population, and in particular in patients who associate an oncological pathology. In the postoperative period, diabetic patients have a significantly higher risk of developing important complications. The aim of this study was to analyze the impact of minimally invasive surgery in patients with colorectal cancer and type 2 diabetes mellitus.
Methods: Between January 2018-2022, 482 patients diagnosed with colorectal cancer were enrolled in the study, of whom 52 were eligible for inclusion. General characteristics and the presence of diabetes before colon cancer diagnosis were identified. Kaplan-Meier analyses were performed according to type of surgery, gender, stage of disease, and associated comorbidities.
Results: Fifty-two patients were included in the study, divided into two groups: 24 underwent laparoscopic surgery and 28 open surgery. Postoperative recovery was faster in patients who underwent laparoscopic surgery, this being also evidenced by a lower number of postoperative hospitalization days (6.67±1.97 vs 9.21±2.36, $p < 0.001$). Regarding postoperative complications, patients with open surgery, had higher rate of minor and major complications according to the Clavien-Dindo classification (67.9% vs 25%), and the long-term survival of patients who underwent laparoscopic surgery was higher.
Conclusions: Laparoscopic surgery is recommended for patients with colorectal cancer and type 2 diabetes, the patients having minimal postoperative complications and a faster postoperative recovery period.
Key words: laparoscopic surgery, colorectal cancer, diabetes mellitus, complications, survival