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Analysis of Prognostic Factors in Complicated Colorectal Cancer Operated in Emergency

Georgiana Bianca Constantin[1], Dorel Firescu[2,3], Dragoș Voicu[2], Bogdan Ștefănescu[2,3], Raul Mihailov[1], Cristina Șerban[2,3], Sorin Berbece[2], Eugenia Panaitescu[1], Rodica Bîrlă[1,4], Cristian Marica[1,4], Silviu Constantinoiu[1,4]

[1]Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
[2]Dunarea de Jos University, Faculty of Medicine and Pharmacy, Galati, Romania
[3]Clinical Emergency County Hospital Sf. Ap. Andrei, Galati, Romania
[4]General and Esophageal Surgery Department, Center of Excellence in Esophageal Surgery, Saint Mary Clinical Hospital, Bucharest, Romania

Abstract

Introduction: In 2018, the colon cancer was the 5th type of neoplasia regarding the cancer mortality and the rectal cancer was the 10th. The survival of patients with colorectal cancer operated in emergency still remains unsatisfactory, the death being due to local recurrences and to metastases. The aim of this study is to evaluate some correlations of overall survival with clinic and paraclinic features, tumor or treatment characteristics in order to identify prognostic factors, for cases with colorectal tumors that underwent emergency surgery.

Material and Methods: We performed a retrospective analysis on 431 patients with colorectal cancer operated in emergency between 2008-2017, excluding 40 patients with postoperative deaths, with a follow-up period of at least one year. There were correlations of some clinic and paraclinic features, tumor or treatment characteristics with the overall survival.

Results: In the univariate statistical survival analysis, a statistically significant association was obtained with: the age> 61 years (p_value = 0.000049), abdominal surgical history (p_value = 0.031725), heart disease (p_value = 0.000007), atrial fibrillation (p_value = 0.007496), preoperative diagnosis (p_value = 0.034352), cachexia (p_value = 0.000000), oliguria (p_value = 0.000000), anemia (p_value = 0.000006) hydro-electrolytic disorders (p_value = 0.000001), tumor localization (p_value = 0.000030), invasion into other organs (p_value = 0.000000), appearance of “frozen pelvis” (p_value = 0.000000), peritoneal carcinomatosis (p_value = 0.000000), liver metastases (p_value = 0.000000), type of surgery (p_value = 0.000000), lymph node dissection (p_value = 0.000001), liver biopsy (p_value = 0.043483), stoma reversal (p_value = 0.000000), serial interventions (p_value = 0.000000), pTNM (p_value = 0.000000), tumor grading (p_value = 0.007069). The Cox multivariate regression analysis revealed that: the age> 61 years - HR = 1,026, 95% CI (1,012, 1,039) (p value = 0.000139), cachexia - HR = 1,358, 95% CI (1,046, 1,764) (p value = 0.021617), peritoneal carcinomatosis – HR = 2.346, 95% CI (1.163, 4.732) (p_value = 0.017253), disease stage - HR = 36.745, 95% CI (14.778, 91.366) (p_ value = 0.000000), intervention type - HR = 0.187, 95% CI (0.045, 0.779) (p_ value = 0.021281) and serial interventions - HR = 0.282, 95% CI (0.144.0.551) (p_ value = 000213) are independent prognostic factors.

Conclusions: The prognostic factors for patients with colorectal cancers operated in emergency are: the age > 61, the presence of abdominal surgical history and associated cardiac conditions, especially atrial fibrillation, diagnosis of diastatic perforation imminence, cachexia, oliguria, hydro-electrolytic disorders at admission, rectal tumors, tumor invasion in other organs, the appearance of "frozen pelvis", the presence of liver metastases or peritoneal carcinomatosis, undifferentiated tumors, stage IV, practicing an internal derivation or not performing lymph node dissection. The age over 61, cachexia, as well as peritoneal carcinomatosis, stage III or IV are independent risk factors the Hartmann procedure and the serial interventions are independent protective factors.

Key words: colorectal cancer, prognostic factors, emergency, surgical treatment