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AIMS AND SCOPE

The primary aim of *World Journal of Gastrointestinal Oncology* (*WJGO*, *World J Gastrointest Oncol*) is to provide scholars and readers from various fields of gastrointestinal oncology with a platform to publish high-quality basic and clinical research articles and communicate their research findings online.

WJGO mainly publishes articles reporting research results and findings obtained in the field of gastrointestinal oncology and covering a wide range of topics including liver cell adenoma, gastric neoplasms, appendiceal neoplasms, biliary tract neoplasms, hepatocellular carcinoma, pancreatic carcinoma, cecal neoplasms, colonic neoplasms, colorectal neoplasms, duodenal neoplasms, esophageal neoplasms, gallbladder neoplasms, *etc.*

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Risk factors for the prognosis of colon cancer

Chu-Ying Wu, Kai Ye

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Abstract

A study on clinical outcomes and prognostic factors in T4N0M0 colon cancer patients after R0 resection revealed that ileostomy, T stage, right hemicolectomy, irregular follow-up, and CA199 level were independent risk factors affecting overall survival. T4-stage cancer invades the entire thickness of the intestinal tract, increasing the difficulty of treatment and the risk of recurrence, and requires a combination of chemotherapy, immunotherapy, and targeted therapy to control the spread of cancer cells. The prognosis of right hemicolectomy is significantly worse than that of left hemicolectomy, and right hemicolectomy is an independent risk factor for a poor prognosis. Advanced age, histopathological type, and lymph node metastasis are also risk factors for colon cancer.

Key Words: Risk factor; Prognosis; Colon cancer; Tumour stage; Right hemicolectomy

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Core Tip: The incidence and mortality rates of colon cancer are increasing; while most cases involve advanced-stage disease, T4-stage disease is rare and poorly studied. Survival time is an important indicator of treatment effectiveness, and this study identified multiple independent risk factors. T4-stage cancer invades the entire thickness of the intestinal tract, increasing the difficulty of treatment and the risk of recurrence, and requires a combination of multiple treatment methods. The prognosis of right hemicolectomy is worse than that of left hemicolectomy, and right hemicolectomy is an independent risk factor for a poor prognosis. Advanced age, histopathological type, and lymph node metastasis are also risk factors.

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TO THE EDITOR

We had the privilege of reading a study on the prognosis analysis of colorectal cancer conducted by Liu *et al*[1]. This retrospective analysis explored clinical outcomes and prognostic factors in T4N0M0 (*i.e.*, stage III without lymph node metastasis) colorectal cancer patients who underwent R0 resection. The incidence and mortality rate of colorectal cancer have risen rapidly in recent years, and clinically, most colorectal cancer patients are in the middle or late stages, and some patients even present with obstruction of the digestive tract. A small percentage of colorectal cancer patients develop invasion of the peritoneal layer or adjacent organs or structures (T4-stage disease)[2,3] and are prone to lymph node metastasis. The occurrence of lymph node metastasis in T4-stage colorectal cancer patients after surgery is low, and studies on such patients are relatively rare. The authors collected data from 200 patients with pTNM stage T4N0M0 colorectal cancer and statistically analysed the data to construct a prognostic model. The prognostic model showed good consistency and accuracy in internal and external validation. The survival rate is an important indicator for evaluating the effectiveness of colorectal cancer treatment, and extending the survival time and improving the prognosis are important clinical issues for colorectal cancer patients. Analysis of the 3-year survival rate of colorectal cancer patients revealed that ileostomy, T stage, right hemicolectomy, irregular follow-up, and CA199 level were independent risk factors affecting the overall survival of T4N0M0 colorectal cancer patients.

T4-stage colorectal cancer patients have tumours that invade the entire thickness of the intestinal wall, which increases the difficulty of treatment to some extent and may cause cancer cells to shed and disperse, leading to posttreatment recurrence and increasing the risk of poor prognosis[4]. Therefore, for such colorectal cancer patients, clinicians can combine chemotherapy, immunotherapy, and targeted therapy to control the spread of tumour cells. In addition, surgeons should adhere strictly to the principle of not touching nontumor regions during surgery to prevent iatrogenic tumour dissemination.

The prognosis of stage IV colorectal cancer after right hemicolectomy is significantly worse than that after left hemicolectomy, and right hemicolectomy is an independent risk factor for poor prognosis, which has been supported by data from multiple different research institutions[5]. Similarly, Benedix *et al*[6] reported that the 5-year DFS rates of patients who underwent right hemicolectomy and those who underwent left hemicolectomy were 73% and 74%, respectively. However, some studies have shown that the 3-year disease-free survival rate and 3-year overall survival rate of right hemicolectomy are lower than those of left hemicolectomy, suggesting that right hemicolectomy is a risk factor for a poor prognosis in patients with T4-stage disease[7].

In addition to the above factors and risk factors such as enterostomy, irregular follow-up, and CA199 level, factors such as advanced age, histopathological type, and lymph node metastasis are also risk factors for colon cancer. Older patients with colorectal cancer have relatively weaker physical function and poorer health status, are often accompanied by other cardiovascular and metabolic diseases, such as diabetes, and have more complications. Tumours in older patients are more likely to be invasive than those in young patients, which may lead to postoperative recurrence and increase the risk of a poor prognosis. Studies have shown that mucinous adenocarcinoma and signet ring cell carcinoma have more aggressive biological behaviour and a worse prognosis than other histological types[8,9]. Patients with colorectal cancer with lymph node metastasis may have residual tumour tissue due to insufficient lymph node dissection or incomplete tumour resection, leading to recurrence[10].

This study has several limitations. First, the number of participants was relatively small, and the data were analysed from a single centre, which may cause bias. Second, the conclusions in the article are all based on retrospective analysis of clinical data from a single centre and lack external validation. Further multi-center studies should be conducted in the future. At the same time, a receiver operating characteristic curve could be added to further verify its accuracy.

FOOTNOTES

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