

## COLORECTAL CANCER IN YOUNG PATIENTS: A CASE REPORT

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Colorectal cancer is the third most common malignant neoplasm worldwide, predominantly affecting the elderly population. However, in recent decades, there has been an increase in its incidence in patients under 50 years of age, who currently represent 7-26% of the diagnosed cases<sup>1-3</sup>.

In this age group, the clinical presentation is similar to that of patients over 50. A previous prevalence study with young patients showed that the most common symptoms are rectal bleeding (57%), abdominal pain (31%), change in bowel habits (21%), weight loss (11%), and anemia (11%)<sup>1</sup>.

Younger patients present a clinically more advanced and biologically more aggressive disease. The most commonly found histologic type is mucinous adenocarcinoma with poorly differentiated signet ring cells<sup>1,3-5</sup>. A retrospective review involving 180 patients younger than 50 years showed that, at the time of diagnosis, 37 (21%) patients were in stage I, 47 (26%) in stage II, 70 (39%) in stage III, and 26 (14%) in stage IV<sup>1</sup>.

The majority of cases are sporadic tumors, as much in younger patients as in older; however, mutation analysis of younger patients, particularly for Lynch syndrome, the most common form of hereditary colorectal cancer, should be performed.

In this report, we present the case of a patient diagnosed with colorectal cancer at the age of 17. Cases like this are rare in the literature; however, they support the statistics that show an increase in the incidence of this type of cancer in young patients.

### CASE REPORT

A 17-year-old male patient, born and raised in Porto Alegre, arrived at the emergency room of Hospital de Clínicas de Porto Alegre complaining of abdominal pain and distension associated with nausea and vomiting for 1 month, weight loss (5 kg in 1 month), and diarrhea for 5 days without associated pathology. There was no family history of colorectal cancer. The patient was an alcoholic (1 L of vodka/day) for 1 year and a daily user of marijuana. Physical examination revealed a body mass index of 16 kg/m<sup>2</sup>, distended abdomen, and shifting dullness but with no other abnormalities.

Laboratory tests showed normocytic and normochromic anemia. Serological tests for HIV and hepatitis B and C were negative.

Abdominal ultrasound confirmed voluminous ascites without changes in structure or hepatic vessel flow. Paracentesis was performed and 3.7 L of a citrine-colored liquid were removed. Cellularity was lymphocyte predominant and cytopathology was negative.

Computed tomography (CT) of abdomen was performed and identified a 5.9 cm-long stenotic lesion in transverse colon causing upstream colonic distension; thickening of the ileocecal valve and of the walls of the terminal ileum; ileal and jejunal distension; and densification of greater omentum, transverse mesocolon and parietal peritoneum associated with ascites (figure 1).

Colonoscopy revealed a vegetating intraluminal lesion occupying 95% of the transverse colon cavity. Biopsies gave a histopathological diagnosis of ulcerated adenocarcinoma with poorly differentiated signet ring cells (figure 2).

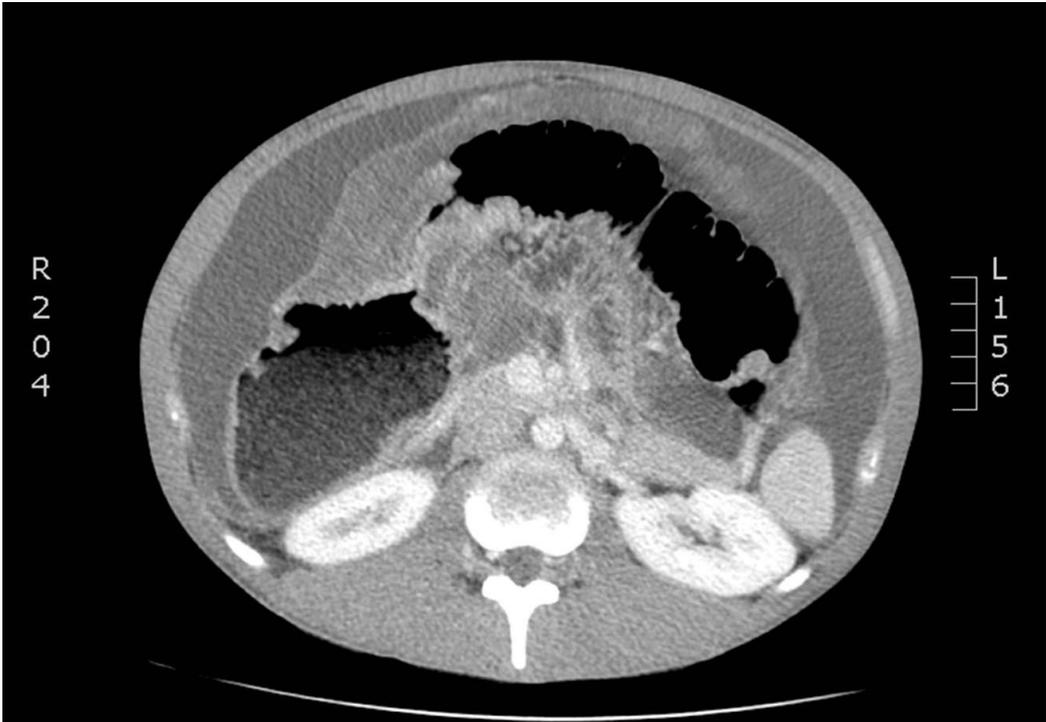
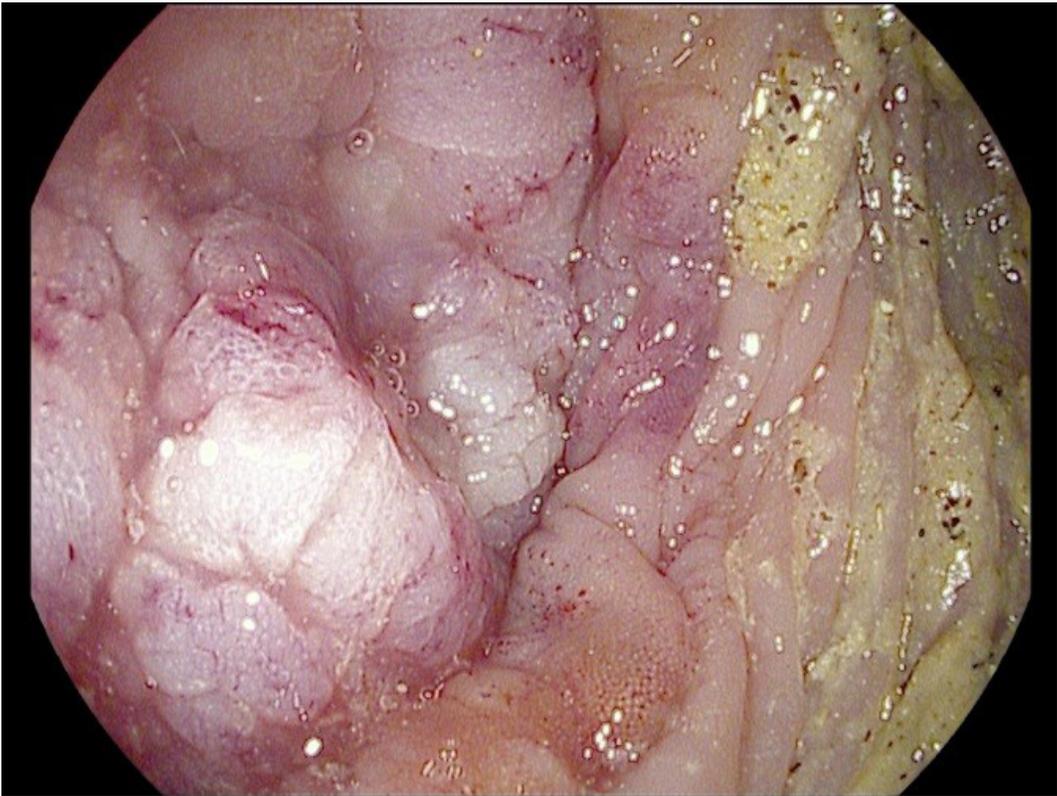


Figure 1: Computed tomographic with stenotic lesion in transverse colon.



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COMMENT:ESPESAMENTO\_NO\_TRANSVERSO

Figure 2: Infiltrative lesion in transverse colon.

Two days later, the patient developed intestinal obstruction and underwent an emergency laparotomy, right ileocelectomy, and ileocolic anastomosis. Among the operative findings there were ascites (3200 mL), tumor in the proximal transverse colon with thickening of the omentum, invasion of the greater gastric curvature, and peritoneal carcinomatosis. Pathological examination confirmed synchronous adenocarcinoma of ascending and transverse colon with metastases to cecal appendix and four lymph nodes, corresponding to surgical stage T4N2M1 (stage IV). A search for Lynch syndrome with mismatch repair immunohistochemistry of microsatellite instability of high-frequency MSH1, MSH2, MSH6, and PMS2 was negative. Chest CT was performed and showed no evidence of metastasis. Patient exhibited good postoperative evolution and after 1 month, at ECOG performance status 0, underwent eight cycles of FOLFOX chemotherapy. Later there was progression of the disease: an increase in abdominal damage and intestinal obstruction, which led to death 7 months after diagnosis.

## DISCUSSION

Colorectal cancer in patients younger than 30 years old corresponds to 1-2% of cases. Biologically, the disease seems to be more aggressive in young patients and 61.8% are in an advanced stage (stages III / IV) at the time of diagnosis. However, there seems to be no difference in survival when compared to older adults, probably because the younger population has fewer comorbidities and better performance in and tolerance to treatments<sup>3,4,6</sup>. Higher rates of peritoneal carcinosis as well as larger (> 5 cm) and

more infiltrative tumors are also reported in younger patients<sup>5</sup>.

Although most cases of colorectal neoplasia are sporadic, in this age group there is a greater incidence of gene mutations and genetic evaluation is recommended for Lynch syndrome by searching for microsatellite instability or examining immunohistochemistry for the presence of DNA repair proteins (MSH1, MSH2, MSH6, and PMS2). The diagnosis of colorectal cancer in these patients modifies the follow-up of first-degree relatives<sup>7,8</sup>. A study comparing the presence of mutated Kirsten Ras (KRAS), BRAF, and MSI (microsatellite instability) genes, which may be associated with aggressive disease and in some cases provide information for treatment purposes, between patient groups under and over 40 years of age showed no statistically significant difference between the groups<sup>6</sup>. In the present case, colonoscopy did not reveal polyps or other findings indicative of familial adenomatous polyposis or inflammatory diseases. Work-up for Lynch syndrome was negative. Testing for KRAS and BRAF mutation was not performed.

Currently, there is a decrease in the incidence of colorectal cancer in patients older than 50 and an increase in incidence in those younger than 50. This is probably related to screening of elderly patients, which makes the treatment of premalignant lesions possible at an earlier stage. The diagnosis in young people is often late since neoplasia is rarer in this age group and the symptoms tend to be attributed to benign pathologies. In light of the foregoing, it is necessary to pay close attention to symptoms in this population and conduct new studies to evaluate the possible benefits of performing early screening<sup>3,5-11</sup>.

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