



Research Article

Impact of Covid 19 Pandemic after the End of the Pandemic: Tsunami Effect in Colorectal Cancer Description of 25 Continuous Cases of Colorectal Cancer Treated in A Single Center

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Abstract

Background: The COVID-19 pandemic led to widespread disruption of colorectal cancer services in 2020. Cancer care pathways have changed in response to reduced diagnostic availability. The purpose of this paper is to evaluate the impact of COVID-19 on late diagnosis in patients with colorectal cancer and the impact in surgical treatment. This was a single-center retrospective study performed at a secondary referral center.

Methods: We selected patients diagnosed with Colorectal Carcinoma (CRC) between January 2023 and April 2023 and analyzed patients in terms of cancer pathological staging (TNM), prevalence of different colorectal cancer locations, type of surgery, postoperative complications, rehospitalization within 30 days of discharge, ostomy rate, and 30-day mortality. We asked if in the previous 5 years they had ever performed a control colonoscopy and if the colonoscopy had not been performed the reason for not performing it.

Results: In all, 25 patients were diagnosed with colorectal adenocarcinoma. 8 patients presented as emergencies with large bowel obstruction or bleeding colorectal cancer. The most common was the T3 stage. T4a stage was represented by 4 patients and T4b stage was represented by 4 patients. Four patients had metastatic disease at the time of diagnosis. A high rate of stoma creation has been reported. The readmission to hospital and complications was 12%. the 30-day mortality was 4%. Twenty-four (96%) patients had never had a colonoscopy in the previous 5 years.

Conclusion : Despite the end of the pandemic, we have observed a series of consecutive cases of CRC in the more advanced stages. one of the causes could be the lack of screening during the covid 19 pandemic. We will observe secondary effects like a “tsunami” in the coming years especially in oncological diseases with diagnostic delay such as CRC.

Introduction

The Covid-19 pandemic in recent months has forced the National Health Service to divert all its energies in the fight against the virus and in assisting Covid-19 patients by suspending diagnostic procedures and non-urgent treatments related to oncological and non-oncological pathology, causing inevitable delays in providing care. Diseases of benign surgical interest have undergone a diagnostic delay and a delay in treatment, manifesting themselves, in the months following the first Lockdown, with a more complicated clinical presentation and difficult surgical management. In fact, in the months of maximum emergency, screening programs were temporarily suspended in Italy, as in many other countries, both because health personnel were diverted to take care of patients with COVID-19 pneumonia and for the need to reduce contagion to a minimum, visits and diagnostic tests were suspended. On the other hand, patients were strongly discouraged from undergoing treatment or diagnostic tests for fear of contagion. During the first phase of the pandemic, with the reduction of diagnostic endoscopies and treatments for early cancer detection, we expect an increase in advanced stage CRC diagnoses in the years to follow with a consequent increase in morbidity and mortality [1,2]. There are several studies demonstrating the worsening of clinical presentation in patients with oncological and non-oncological diseases after the covid 19 pandemic [1-3]. In this study we performed a retrospective study in a single center, collecting data on patients who underwent urgent and elective colorectal resection from January 2023 to December 2019, comparing them with the data for January 2020 to December 2021. 115 patients who underwent VLS / open colorectal resection were selected in the Control group. In the same observation period, but the previous two years, 137 patients were selected in Study group. The surgical interventions were performed by the same equipe and two operators performed laparoscopy. The major difference found between the two groups was in the TNM stage, especially in T with significant increase of patients with T4a and T4b in the study group (2020-2021 years after the first lock down) compared to the control group (2018- 2019) [3]. Despite the end of the pandemic and the reduction of cases of Covid 19 infection, too many patients have given up on undergoing an endoscopic examination for the early diagnosis of CRC. Indeed, we expect a worsening of the clinical presentation of CRC in the coming years.

Methods

Study Design

We performed a retrospective study in a single center, collecting data on patients who underwent urgent and elective colorectal resection from January 2023 to April 2023. 25 patients who underwent VLS / open colorectal resection were selected.

The surgical interventions were performed by the same equipe and two operators performed laparoscopy. Each patient underwent an interview regarding the reason for not performing a colonoscopy in the previous 5 years.

Setting

This was a Single Center, retrospective Study.

Inclusion Criteria

Inclusion criteria were all patients older than 18 years, both genders, who underwent elective/emergency, that is classical/ laparoscopic resection due to CRC.

Outcomes

The aim of the study was to evaluate in a series of consecutive patients treated for colorectal cancer the clinical presentation of the pathology, surgical approach, prevalence of stoma, rates of hospital readmission, postoperative complications such as anastomotic leak 30-day mortality.

Results

A total of 25 patients with a mean age of 68,2 years were included in this study. 15 patients were male, 10 female.

Tumor Sites

The most common tumor localizations were rectum (40%). Six patients had localization of the tumor in the left colon (24%). Three patients (12%) had anal canal cancer, Six patients (24%) had localization in the cecum and right colon.

Type of Surgery

Anterior Resection of Rectum (RAR) was the most common operation performed, which represents 64% of all operations. 3 patients (12%) underwent miles. Six patients (24%) underwent right hemicolectomy. A total of 10 laparoscopic colorectal resections were performed (40%). The conversion rate was 33% (3 patients). The reasons for the conversion were a case of laparoscopically uncontrolled bleeding, two cases of tumor infiltrating the bladder and ureter.

Emergency Setting

Eight patients (32%) came from the emergency department with a diagnosis of large bowel obstruction or suspected bleeding colon cancer. In the event of obstruction, most of the patients were treated surgically within 48 hours of hospital admission, patients with bleeding of colorectal origin were first treated with medical therapy, underwent an abdominal CT scan with contrast medium and radiological suspicion of bleeding colorectal growths were treated surgically.

Surgery with Stoma

In Eleven patients (44%) , the operation was completed by creating a terminal stoma. The stoma was created in patients undergoing miles and in patients treated for stenosing left colon cancer with clinical presentation of severe intestinal obstruction, in cases of intestinal perforation or in patients with low rectal CRC in which the anastomosis would have been at high risk of dehiscence.

Hospital Stay, Anastomotik Leak and Readmission to Hospital

The mean postoperative hospital stay in the was 9.58 ± 3.64 days. Regarding postoperative complications as anastomotic leak, two patients (8%) showed anastomotic leak treated conservatively. Three patients were readmitted in hospital in the interval of 30 days from discharge (12%). The reasons for hospitalization were: A case of urosepsis in a patient with ureteral anastomosis due to an infiltrating tumor on the left ureter, An abscess of the surgical wound, an intra-abdominal abscess in a patient treated for right colon cancer with intestinal perforation as the first presentation of the disease. 30-day mortality was one case (4%).

Staging

We analyzed the proportions of different T stages . T1 stage was represented by 2 patients. T2 stage was represented by 5 patients. The most common was the T3 stage with ten patients (40%). T4a stage was represented by 4 patients and T4b stage was reoresented by 4 patients (32%).

Lymph Node Involvement

The average number of isolated lymph nodes in the study group of patients was 20.32 ± 10.23 . We analyzed the percentage of different N stages and the most common was the N2 stage (48%).

Metastatic Disease

Patients with metastatic disease were 3 (12%). One patient had peritoneal mucin implants with liver mucinous metastasis, two patients had diffuse peritoneal carcinomatosis at the time of diagnosis.

Colonosopia

Ten patients regarding the colonoscopy interview answered that they did not consider it necessary to perform a control colonoscopy, Nine patients reported that they had booked a control colonoscopy but postponed it due to the covid 19 pandemic, one patient in follow up for RCU underwent regular yearly coloscopy, two patients with abdominal symptoms for 6 months were unable to book a colonospy due to waiting list. 3 patients had undergone colonoscopy but more than 5 years ago.

Discussion

The Covid-19 pandemic in recent months has forced the National Health Service to divert all its energies to fighting the virus and assisting Covid-19 patients by suspending diagnostic procedures and non-urgent treatments related to oncological and non-oncological pathologies, causing inevitable delays in the provision of care [2]. In response to the coronavirus disease 2019 (COVID-19) pandemic, all hospitals and outpatient care centers have delayed medical procedures and non-emergency surgeries. This recommendation also led to the suspension of colonoscopies for colorectal cancer screening and surveillance [4]. Screenings are essential in cancer prevention as they allow for the removal of pre-cancerous lesions, preventing the lesion from progressing to the early stages of cancer. Without these early detection and screening methods, the consequences could be fatal [5]. There has been a dramatic reduction in CRC screening during the pandemic. The reduction in screening and colonoscopies delays has led to an increase in CRC diagnoses especially in the late stage as the medical community has already predicted that this delay will lead to more CRC cases and deaths in the future [6]. In our study we have highlighted an overall increase in colorectal cancer cases, an increase in patients undergoing emergency surgery for intestinal obstruction, a worsening of the presentation of the disease in the more advanced stages. More patients were treated in the stage of metastatic disease. A stoma could be created especially in case of emergency resections for bowel obstruction where it is not possible to perform anastomosis in one step, ileostomy to protect a very low anastomosis, or in case of abdominoperineal excision. from the interview performed on the patients, only one patient had undergone colonoscopy in the previous 5 years. Most of the patients have delayed their screening due to the covid 19 pandemic.

Conclusion

Population-based endoscopic examinations and stool-based tests enable early diagnosis of cancer and improved the devastating statistics regarding the outcome of CRC diagnosis. The COVID-19 pandemic has put the world on hold and instituted lockdowns, notably disrupting the CRC's screening programs. The reasons for the shutdown were the allocation of limited hospital resources for the fight against COVID-19 and the continued fear of nosocomial SARS-CoV-2 infection. CRC screening programs were disrupted, this included a decline in general practitioner referrals, patients' reluctance to participate in stool-based testing, patients canceling or rescheduling colonoscopy appointments out of fear or on the part of the institutions because they worked with limited capacity and the change in treatment involves complying with the regulations brought about by the pandemic. Although

our surgical department remained fully functional even during the first period of the pandemic, a substantial number of patients with CRC went undiagnosed, which, in the short term, resulted in an increase in obstructive CRC and the presence of high-density adenomas. risk. The long-term effects of the diagnostic backlog could result in a devastating increase in late-stage CRC cases and overall years of life lost due to lack of appropriate treatments for these patients. 3 years after the start of the pandemic, in fact, we diagnose many cases of CRC in an advanced stage. Late-stage CRS cases have changed our surgical approach with more patients treated with open surgery and more patients treated urgently; These prognostics, however, can be mitigated if adequate recovery screenings are provided. These lessons can also serve as a teaching moment for healthcare leadership and can provide guidelines for minimizing and avoiding disruption to cancer screening programs altogether if new infectious agents appear that cause a pandemic. May 5, 2023 will remain a historic day for the Covid-19 pandemic. On that date, the World Health Organization officially declared the end of the health emergency that broke out just over three years earlier, on 11 March 2020, with the declaration of the start of the pandemic. Despite the end of the pandemic, we will observe the secondary effects as a “tsunami” in the coming years especially in oncological diseases with diagnostic delay such as CRC.

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