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โรคมะเร็งลำไส้ใหญ่และไส้ตรงในช่วงที่มีการระบาดของโรคโควิด-19: กรณีศึกษาโรงพยาบาลโพนทอง จังหวัดร้อยเอ็ด

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Colorectal Cancer during the COVID-19 Pandemic Era: A Case Series in Phonthong Hospital, Roi-Et Province

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บทคัดย่อ

หลักการและวัตถุประสงค์: โรคมะเร็งลำไส้ใหญ่และไส้ตรงเป็นมะเร็งที่พบเป็นอันดับที่ 4 ของประเทศไทย คาดการณ์ว่าในช่วงที่มีการระบาดของโรคโควิด-19 ซึ่งเป็นช่วงที่ไม่มีโครงการตรวจคัดกรองผู้ป่วยมะเร็งลำไส้ใหญ่และไส้ตรงจะพบผู้ป่วยโรคมะเร็งลำไส้ใหญ่และไส้ตรงโดยเฉพาะระยะท้ายของโรคเพิ่มขึ้น ดังนั้นการศึกษานี้จึงมีวัตถุประสงค์เพื่อศึกษาจำนวนผู้ป่วยโรคมะเร็งลำไส้ใหญ่และไส้ตรงในช่วงที่มีการระบาดของโรคโควิด-19 ณ โรงพยาบาลโพนทอง จังหวัดร้อยเอ็ด

วิธีการศึกษา: การศึกษานี้เป็นการศึกษาเชิงพรรณนาแบบตัดขวาง เก็บข้อมูลตั้งแต่เดือนกรกฎาคม ถึงธันวาคม พ.ศ. 2564 ซึ่งเป็นช่วงที่มีการระบาดของโรคโควิด-19 ทำการรวบรวมผู้ป่วยที่ได้รับการวินิจฉัยและรักษาโรคมะเร็งลำไส้ใหญ่และไส้ตรง โดยทำการวิเคราะห์ข้อมูล ได้แก่ อายุ เพศ ตำแหน่งของรอยโรค ระยะของโรค และวิธีการรักษา

ผลการศึกษา: ระยะเวลาในการศึกษา 6 เดือน พบว่าผู้ป่วยที่ได้รับการวินิจฉัยโรคมะเร็งลำไส้ใหญ่และไส้ตรงรายใหม่จำนวน 16 ราย ส่วนใหญ่เป็นระยะ 4 (ร้อยละ 68.75) และระยะ 3 (ร้อยละ 31.25) ไม่พบผู้ป่วยระยะ 0 1 และ 2 โดยผู้ป่วยทั้งหมดตรวจพบว่ามีต่อมน้ำเหลืองโตทางคลินิกซึ่งแสดงให้เห็นว่าผู้ป่วยเป็นระยะท้ายๆ ของโรค (advanced stage) ตามระบบ TNM staging ตำแหน่งที่พบมะเร็งส่วนใหญ่ตรวจพบบริเวณไส้ตรง (rectum) (ร้อยละ 56.25) ตามมาด้วยลำไส้ใหญ่ด้านซ้าย (descending colon) และส่วนเรคโตซิกมอยด์ (rectosigmoid colon) เท่าๆ กัน (ร้อยละ 12.5) พบผู้ป่วยที่มาด้วยภาวะฉุกเฉินร้อย 37.5 โดยผู้ป่วยดังกล่าวทุกรายมีอาการอุดตันลำไส้จากก้อนมะเร็ง ผู้ป่วยได้รับการรักษาโดยการผ่าตัดเพื่อหายจากโรคร้อยละ 25 ขณะที่ร้อยละ 75 เป็นการรักษาแบบประคับประคอง

สรุป: จากการศึกษาในช่วงที่มีการระบาดโรคโควิด-19 มีผู้ป่วยโรคมะเร็งลำไส้ใหญ่และไส้ตรงระยะท้ายค่อนข้างสูง ซึ่งจะส่งผลให้ผู้ป่วยดังกล่าวมีอัตราการรอดชีวิตต่ำลงและอัตราการเสียชีวิตจากโรคสูงขึ้น

คำสำคัญ: มะเร็งลำไส้ใหญ่, มะเร็งไส้ตรง, โรคโควิด-19

Abstract

Background and Object: Colorectal cancer (CRC) was the fourth most common cancer in Thailand. During COVID-19 pandemic, CRC screening program was not performed. Advanced stage of CRC may be increased. This study aimed to the impact of COVID-19 pandemic on CRC at Phontong hospital, Roi-Et province.

Methods: A cross-sectional descriptive study, between July 2021 and December 2021, COVID-19 pandemic period. We included newly CRC patients. The data analyzed the following variable included age, gender, tumor location, staging and treatment modality.

Results: During 6 months period, we evaluated 16 patients who newly diagnosed CRC. The most frequent staging was stage IV, in 68.75% followed by stage III 31.25% of cases, there were no stage 0, I and II. All of patients (100%) presented clinically node positive represented advanced TNM stage. The most common location of cancer was rectum (56.25%) followed by descending and rectosigmoid colon (12.5%) equally. Emergency clinical presentation was 37.5%, all of them presented as obstructive symptom. Curative surgery was performed in 25%, whereas 75% of the cases were palliative care.

Conclusion: There was increasing advanced stage of CRC during COVID-19 pandemic represented increase a low survival rate and mortality rate in CRC patients.

Keyword: colon cancer, rectal cancer, COVID-19

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Introduction

Colorectal cancer (CRC) is one of the leading causes of cancer deaths and the fourth most common cancer, accounts for 11.1% of the cancer burden in Thailand.[1] The incidence of CRC has been increasing in worldwide, included Thailand.[2] In early stage of CRC, it is good prognosis with an overall mortality of 8.5%[3]

Even when screening program discontinued and reduced screening rates, delay in diagnosis increase more patients who diagnosed CRC deaths. Delays in treatment have also been shown to be associated with lower survival. [4, 5] Thus, primary prevention is the main strategy to reduce the growing the burden of CRC.

November 2019, the 1st known case as an acute respiratory infectious disease called SARS-COV-2 in Wuhan, China. The disease has since spread, and the World Health Organization (WHO) announcing a global pandemic in March 2020.[6] Preventive CRC screening service have seen a dramatic decline worldwide.[7] Cancer screening programs have been suspended in many countries, included Thailand.[8]

Phontong hospital, Roi-Et province, the M2: Middle-level hospital was affected in the problem. There are only one general surgeon who is capable of performing colonoscopy (diagnostic and therapeutic) and colorectal operations. In the practice, we found some problems of screening program such as a numerous of patients fear and averse hospital and health care teams were redeployed to COVID-19 related activities.

The present study was designed to demonstrate the impact of COVID-19 pandemic on delay treatment of CRC at Phontong hospital, Roi-Et province. The importance of knowing about the results consequence in the planning of CRC screening program of our hospital in the serious situation.

Method

We conducted a cross-sectional descriptive study at surgery unit of Phonthong hospital, with medical records of patients diagnosed, investigated and treated at Phonthong hospital between July 2021 and December 2021, COVID-19 pandemic period. We included only the patients with newly CRC diagnosed and excluded patients who prior CRC diagnosed. The data analyzed were age, gender, tumor location, staging according to the American Joint Committee on cancer (AJCC) TNM system 8th edition. The main outcome was incidence of newly colorectal cancer cases. All data were collected to data collection form and inserted in MS Excel® spreadsheet then analyzed with the SPSS Ver. 22 software. We present quantitative variables as mean ± standard deviation, and qualitative variables as frequency and percentage. This study was approved by the Ethics in Research Committee of the Roi-Et province health office ethic committee (Opinion number: COE 0052565).

Results

This study included 16 patients. Among all patients, 68.75% were men, and the mean age was 65.56 (SD=13.80, Max 83, Min 43) years. The mean BMI was 20.62 (SD=4.43) kg/m^2. There are 62.5% had no underlying disease. ASA class I and ECOG 0 was the most at presentation in 56.25%, 50% respectively (Table 1).

Table 1 Patient characteristics (N=16).

Variables	N (%)
Sex (Male)	11 (68.75)
Age (Years), Mean (S.D.)	65.56 (13.80)
BMI (Kg/m^2), Mean (S.D)	20.62 (4.43)
Underlying	
No UD	10 (62.5)
ASA Classification	
I	9 (56.25)
II	7 (43.75)
III	0 (0)
IV	0 (0)
ECOG	
0	8 (50)
1	6 (37.5)
2	2 (12.5)
3	0 (0)
4	0 (0)

Table 2 Location of tumor (N=16).

Locations of tumor	N (%)
Caecum	0 (0)
Ascending colon	1 (6.25)
Hepatic flexure colon	0 (0)
Transverse colon	1 (6.25)
Splenic colon	0 (0)
Descending colon	2 (12.5)
Sigmoid colon	1 (6.25)
Rectosigmoid colon	2 (12.5)
Rectum	9 (56.25)

The most common location of cancer was rectum (56.25%) followed by descending and rectosigmoid colon (12.5 %) equally (Table2).

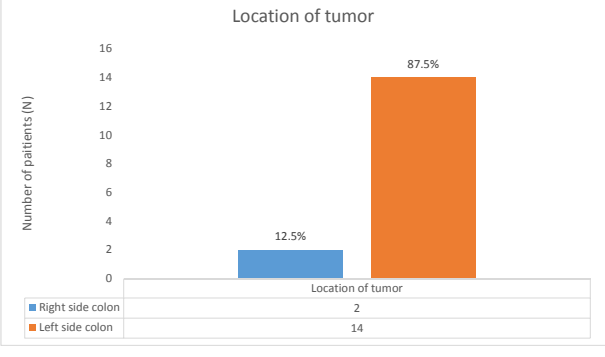

Figure 1 Anatomical site distribution of tumor (Right and left colon) (N=16).

Anatomical site distribution of tumor as right and left side of colon locations (Figure1), Most 87.5% abnormalities location of tumor were found in the left side of the colon and only 12.5% in the right side.

As for TNM staging, Clinically T3 disease was the most present in 56.25% of patients at diagnosis. Only 31.25% presented with organ confined disease as stage III. Clinical metastasis (Stage IV) was 68.75%. No any patients had presented as stage 0, I or II (Table 3). All of patients presented clinically node positive represented advanced stage; 31.25% only to regional lymph nodes (as stage IIIB in TNM staging) and 68.75% to other organs (stage IV) (Table 3).

Table 3 TNM staging (N=16).

Clinical category	N (%)
Clinical tumor	
cT1	0 (0)
cT2	0 (0)
cT3	9 (56.25)
cT4	7 (43.75)
Clinical node	
cN0	0 (0)
cN+	16 (100)
Clinical metastasis	
cM0	5 (31.25)
cM+	11 (68.75)
Clinical staging	
Stage 0	0 (0)
Stage 1	0 (0)
Stage 2	0 (0)
Stage 3	5 (31.25)
Stage 4	11 (68.75)
Not advanced (cT1-3N0M0)	0 (0)
Advanced (cT4 or cN+or M+)	16 (100)

Table 4 Metastatic organ (N=11).

Metastasis organs	N (%)
Liver alone	0 (0)
Lung alone	4 (36.36)
Liver and lung	5 (45.45)
Liver, Lung and Bone	2 (18.18)
Total	**11 (100)**

Stage IV, all of them had radiographic evidence of metastatic disease. The presence of distant metastasis was documented in 11 cases, 68.75% of patients at the time of diagnosis. Liver and lung were common metastasis organs (5 patients, 45.46% of stage IV), followed by only lung metastasis (4 patients, 36.36% of stage IV) and liver, lung and bone metastasis (2 patients, 18.18% of stage IV) (Table 4).

Table 5 Clinical presentation at admission (N=16).

Clinical presentation at admission	N (%)
Emergency	6 (37.5)
Obstruction	6 (37.5)
Non-emergency	10 (62.5)
Total	**16 (100)**

Non-emergency clinical presentation was 62.5%. On the other hands, emergency clinical presentation was 37.5%, all of them were obstructive symptom (Table 5).

Surgery had curative intent in 25% of the cases, 18.75% received neo-adjuvant treatment and adjuvant treatment in 6.25%. Whereas in 75% of the cases was palliative, 43.73% palliative surgery, 6.25% in palliative surgery with adjuvant therapy and 25% only palliative treatment (Table 6).

There were 12 patients on going surgery, equally half of them emergency and non-emergency operation (Table 7).

Table 6 Treatment modality. (N=16)

Treatment modality	N (%)
Curative	4 (25)
Surgery + Neo-adjuvant	3 (18.75)
Surgery + Adjuvant	1 (6.25)
Non-curative	12 (75)
Only palliative	4 (25)
Surgery + Palliative	7 (43.75)
Surgery + Adjuvant + Palliative	1 (6.25)

Table 7 Type of surgery (N=12)

Type of surgery	N (%)
Emergency	6 (50)
Non-emergency	6 (50)
Total	**12 (100)**

Discussion

Colonoscopy is one of the best of the CRC screening tests. It can detect premalignant lesions and early stage CRC with capable biopsy and endoscopic treatment the lesions. Therefore, colonoscopy can prevent and reduce the incidence of disease, especially advanced stage result to decrease mortality from CRC. [9, 10]

According to COVID-19 pandemic period, our colonoscopy unit was limited for screening colonoscopy in asymptomatic and average-risk population. Due to absolutely defensive policy and lack of CRC screening cause by COVID-19 pandemic, we estimate increase and burden advanced stage CRC incidence in our hospital.

In 2017, CRC screening program was established in Thailand. The program encourage participants who asymptomatic and 50-70 years in age screening FIT test and FIT-positive individuals were invited to undergo colonoscopy. At the same year, National Cancer Institute of Thailand reported the incidence of newly CRC patients staging; is 3.68% for stage I, 17.24% for stage II, 31.26% for stage III, and 39.54% for stage IV. [11] In our study, new 16 CRC patients who diagnosed, investigated and treated. The majority of patients have clinical metastasis as stage IV (68.75%) and stage III (31.25%), no any patients had presented as stage 0, I or II. All of patients presented clinically node positive represented advanced stage according to the American Joint Committee on cancer (AJCC) TNM system 8th edition.

Many studies found that, the CRC patients who undergo emergency surgery about 7% to 40%, mainly due to obstruction and perforation. There is a significant increase in rate of morbidity and mortality and decrease in survival over five years.[12-15] Our study demonstrated non-emergency clinical presentation was 62.5%. On the other hands, emergency was 37.5%, all of them had presented with acute colonic obstructive symptom and undergo emergency operations. We estimated the same worse prognosis as the literatures.

Roi-Et province cancer service plan, there are multidisciplinary team; surgical oncologist, general surgeon, medical oncologist, radiation oncologist and family physician. 31.25% of patients need undergo adjuvant or neo-adjuvant treatment were referred to Roi-Et hospital, tertiary hospital and regional cancer center, 50 kilometers distance from Phonthong hospital. The patients with stage IV who undergo palliation were consulted family physicians and end of life care team for intensive palliative and holistic care at our hospital.

Our study allowed us to verify that advanced stage CRC in COVID-19 were found increasingly during pandemic situation which during related their mortality and quality of life. We estimate same or more increasing rate of advanced stage in the next few years. These data had reflected the problem in CRC screening policy that would make early diagnosis and treatment of this disease possible. The next our planning, we encourage FIT test screening in average-risk population according nationwide Thailand CRC screening program and then COVID-19 screening before colonoscopy program who FIT test were positive. One day surgery is the interestingly program and just started in our hospital (December, 2021). We are confidently the platform will provide patients received better opportunity for CRC screening.

Limitations

Limitations of our study, First; the study was conducted in single center represented to small number of patients. Second; performed only single surgeon, there were some patients who loss diagnosis and referred to the tertiary hospital. Third, short period time to collected data. And the fourth, study in medical record represented to completion of data.

Conclusion

CRC is one of the most cancer burden in COVID-19 pandemic period. Due to screening for CRC was discontinued, there was a high incidence of advanced stage represented increase mortality rate and low survival rate. Our results could be able to provide appropriate policies, early detection and treatment of CRC. Another study with high volume center and longer follow-up may provide better scientific evidence on these variables.

Conflicts of Interest

No potential conflicts of interest relevant to this article was reported.

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Author Contributions

Conceptualization: Pissanu pana
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Formal analysis: Pissanu pana
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