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Colorectal Malignancies Presenting as a Surgical Emergency

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ABSTRACT

Background: Gastrointestinal malignancies are common tumours. Emergency presentation of these cases represents a diagnostic and therapeutic challenge and carries a higher rate of mortality and morbidity compared to instances of colorectal tumours operated upon electively. Most of these patients had previous symptoms suggestive of colorectal pathology.

Objectives: To identify factors in the clinical history of the patient with colorectal malignancy presenting as an acute surgical emergency that may help in early detection of these cases.

Methods: a retrospective study of 47 patients histopathologically proven to have colorectal carcinoma and presented as abdominal emergencies at AL-Yarmouk teaching hospital from January 2022 to December 2022. Data obtained include age, gender, history, presentation, type of surgery, morbidity and mortality.

Results: Emergency presentation of colorectal carcinoma represents 38.84% of the total cases registered during the period of the study. Thirty-nine patients were above 50 years old (82.96%). Most of the patients have associated comorbidities (82.97%). Most of the patients had a history of symptoms related to the GIT (82.35%), especially constipation (40.43%) and frequent usage of enema (34.04%), with only 8.51% having had a previous colonoscopy. The majority of the patients presented with intestinal obstruction (70.21%). All patients underwent emergency surgery, which consisted of definitive resection (38.30%), staged resection (46.80%), and palliative resection (14.90%). Tumours were found to be advanced in 63.83% of the cases.

Conclusions: One-third of the colorectal malignancies presented as abdominal emergencies. With associated comorbidities and previous clinical history suggesting colorectal disease. A good screening program will decrease the incidence of this problem.

INTRODUCTION

The incidence rates of colorectal carcinoma have increased in recent years almost all over the world. Worldwide, there are 1.93 million new cases of colorectal cancer, making it the third most commonly diagnosed cancer globally. It was also a leading cause of cancer mortality, resulting in around 916,000 deaths—accounting for about 9% of all cancer-related deaths.[1]

The overall lifetime risk of developing colorectal cancer is about 4.4% for men (1 in 23) and 4.1% for women (1 in 25) in the United States. [2]

In England, an average of 20,293 new colorectal cancer cases were diagnosed annually, which accounted for approximately 12% of all new cancer cases in males and 11% in females.[3]

According to the Iraqi National Cancer Registry (INCR), a cumulative total of 20,880 colorectal cancer cases were registered across Iraq from 2019 to 2000. In 2019 specifically, colorectal cancer accounted for approximately 6.5% of all newly diagnosed malignancies nationwide, corresponding to an incidence proportion of 6.18 cases per 100,000 population.[4]

Emergencies due to gastrointestinal malignancies, especially colorectal tumours, occur in 6 to 34% of cases and are predominantly manifested with obstructive symptoms, typically indicating advanced pathology associated with higher morbidity and mortality, more extended hospital stay, poor long-term survival, and higher health care costs.[5]

Late detection with widespread metastatic disease can lower this survival rate to 8.1% at 5 years. 2 Screening initiatives are currently being assessed and implemented worldwide to lower the disease burden and to stimulate early detection.[6]

Aim of the Study: To identify clinical history factors in colorectal cancer patients presenting as acute surgical emergencies that may aid in earlier detection.

MATERIALS AND METHODS

This retrospective study includes patients with acute abdominal surgical emergencies who were admitted to the surgical department in Al Yarmouk Teaching Hospital over the period of 12 months (from January 1, 2023, to December 31, 2023). Only cases discovered intra-operatively to be due to colorectal malignancy were included in the study.

A special form had been prepared to record the relevant clinical data, including present illness, history with special emphasis on GIT-related symptoms, past medical and surgical history, and detailed physical Examination, the results of investigations, operative findings, and the procedures done. Also, data were collected regarding early post-operative complications and mortality.

The final diagnosis of the malignant process by histopathological Examination was documented.

Forty-seven cases were closely followed from admission to discharge from the Hospital.

All the data were studied and categorized in tables to identify any relationships between factors in the clinical history that may aid in the early detection of cases of colorectal carcinoma presenting as abdominal emergencies, and to determine the best surgical approaches to be taken

according to the morbidity and mortality encountered postoperatively.

RESULTS

The majority of the patients included in this study were in the old age group, with 24 patients over the age of 60 years (51.06%). Only two patients were in the third decade (4.26%), and no patients presented in the age group below 30 years old (Table 1).

Cases were subsequently categorized into two groups: intestinal obstruction (33 cases) and perforation (14 cases), accounting for 70.21% and 29.79% of the total emergency cases, respectively. (Table 2). Among 121 cases of colorectal carcinoma registered at Al Yarmouk teaching Hospital, which represent the total cases registered during the period of the study, 74 patients presented as elective cases (61.16%), and 47 patients presented undiagnosed to the emergency department as abdominal emergencies (38.84%).

These cases were later divided into two categories: intestinal obstruction (33 cases) and perforation (14 cases), representing 70.21% and 29.79%, respectively. Clinical presentation, examination findings, and diagnostic approach of the study patients are summarised below:

Clinical History

- Constipation: 19 (40.43%) → enema use: 16 (34.04%)
- Abdominal pain: 18 (38.30%)
- Loss of appetite: 17 (36.17%)
- Weight loss: 9 (19.14%)
- Rectal bleeding: 6 (12.77%)

More detailed history findings in Table 3.

abdominal Examination

- Distension: 31 (65.95%)
- Tenderness: 38 (80.85%)
- Palpable mass: 9 (19.14%)

Work up

All the investigations had been done in the emergency department within twelve hours after admission:

Laboratory

- Hemoglobin <10 g/dl: 21 (44.68%); ≥10 g/dl: 26 (55.32%)
- Leukocytosis: 20 (42.55%); normal: 27 (57.45%)
- Blood urea >45 mg/dl: 15 (31.91%); ≤45 mg/dl: 32 (68.09%)

Radiology

- Plain abdominal X-ray: air–fluid levels in 20 (42.55%)
- Ultrasound: free fluid in 4 (8.51%)
- CT scan: 13 done → mass in 9 (19.14%)
- CT not done: 34 (instability/unavailability)

Intra-operative findings and surgical approach:

The majority of the tumours were found in the descending colon and rectum, and only five were found in the transverse colon (Table 4).

Definitive resection was achieved in 18 patients (38.3%). Staged procedures were required in 22 (46.8%), either resection with exteriorization or resection with diverting stoma. Palliative surgery was performed in 7 (14.9%) with unresectable tumours, including colostomy, ileostomy, or bypass.

Post-operative period:

Early post-operative morbidity was relatively common, affecting nearly one-third of the patients. It was highest among those who underwent definitive surgery, followed closely by staged resections (Table 5)

Histopathological Examination:

Adenocarcinoma was confirmed in all patients, and according to the modified Dukes classification, most patients presented at advanced stages (C and D), consistent with their emergency presentation (Table 6).

DISCUSSION

Colorectal carcinoma is among the most prevalent tumours worldwide. Despite advances in diagnosis, a considerable proportion still present as undiagnosed emergencies. In such cases, clinical history remains crucial for guiding diagnosis, while selecting the appropriate surgical approach poses an additional challenge.

Emergency colorectal cancer was more frequent in males (Male: Female, 1.61:1), consistent with Santos' report from Brazil (1.33:1) [7].

Most patients were older than 60 years (48.94%), consistent with Santos' study reporting 48.1% above 60 years. The lowest incidence occurred in younger groups, with only 4.26% under 40 years, similar to Razzouki's Iraqi study, where 1.5% were below 39 years [7-8].

In our study, 38.84% of colorectal carcinoma cases at Al-Yarmouk Teaching Hospital presented as abdominal emergencies, compared to only 9.5% in Amri's U.S. series. This discrepancy may reflect the absence of screening programs in Iraq. While a British pilot study showed reduced emergency presentations with faecal occult blood testing, subsequent Canadian and UK studies reported persistently high rates despite established screening programs. [6_10]

Obstruction was the predominant presentation (70.21%), while 29.79% presented with perforation. In contrast, Hwang reported obstruction in 59%, perforation in 9%, and bleeding in 34% of cases. [11]

Most patients had prior gastrointestinal symptoms: constipation (40.43%), recurrent diarrhoea (6.38%), altered bowel habits (27.65%), frequent enema use (34.04%), rectal bleeding (12.77%) and nonspecific abdominal pain (38.30%). Vega reported that the most sensitive diagnostic symptoms for colorectal cancer were rectal bleeding with stool (51%), change in bowel habits (52%), and abdominal pain (35%), while constipation (13%) and diarrhoea (20%) showed poor predictive value, emphasizing the limited diagnostic utility of symptoms alone. [12]

In our series, previous non-gastrointestinal blood tests were available for 20 patients, of whom 7 (14.89%) already demonstrated anaemia. Archer similarly reported that 12% of patients had iron-deficiency anaemia for more than six months and 6% for over one year

before diagnosis. A Spanish study identified anaemia in 46% of colorectal cancer cases, highlighting the frequent under-recognition of iron deficiency as a clinical indicator, despite guideline recommendations for early referral to investigate possible gastrointestinal blood loss. [13_14]

In our series, staged resection was the most frequently performed procedure, while palliative surgery was the least common. The surgical approach was guided by the mode of presentation (obstruction or perforation), patient-related factors (age, comorbidities, delayed admission, overall condition), and intraoperative findings (tumour site, size, and degree of contamination). These observations align with the results of Caetano [7], Razzouki [8], and Remzi [9], who reported similar determinants of surgical choice. Current evidence suggests that management of complicated colorectal carcinoma is becoming more radical, with immediate tumour resection recommended for most patients. Abdel-Razek [15] further highlighted that excision of resectable tumours during emergency surgery may improve survival to levels approaching those of elective cases. While resection with primary anastomosis remains the standard for right-sided obstruction, it has also been shown to be a safe option for selected left-sided cancers.

Histopathological analysis demonstrated that 63.83% of resected tumours were Dukes D, underscoring the impact of delayed presentation. This trend is consistent with previous reports, which documented stage III–IV disease in 53–62% of patients using the TNM classification. [7,9,16]

CONCLUSION

Acute abdominal emergencies are a common presentation of colorectal cancer, particularly in elderly patients with advanced disease, highlighting the importance of early recognition and timely intervention.

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REFERENCES

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin*. 2021;71(3):209–49.

2. American Cancer Society. *Colorectal Cancer Facts & Figures 2020–2022* [Internet]. Atlanta: American Cancer Society; 2020. Available from: https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/colorectal-cancer-facts-and-figures/colorectal-cancer-facts-and-figures-2020-2022.pdf

3. Cancer Research UK. **Bowel cancer incidence statistics** [Internet]. Cancer Research UK; 2023. Available from:

4. https://www.cancerresearchuk.org/health-professional/cancer-

statistics/statistics-by-cancer-type/bowel-cancer/incidence

5. Al-Thuwaini TM, Al-Dabbagh SA, Al-Hadithi TS. Trends in colorectal cancer in Iraq over two decades: incidence, mortality, topography and morphology. *Saudi Med J.* 2022;43(3):252-259.

6. Sloothaak DAM, Oosterling SJ, van der Heijden JAG, Gröne J, van der Linden JC, van der Harst E, Bemelman WA, Tanis PJ, Dutch Snapshot Research Group. Emergency resection is an independent risk factor for decreased long-term overall survival in colorectal cancer: a matched-pair analysis. World J Surg Oncol. 2023;21(1):226.

7. Ramzi Amri, Liliana G. Bordeianou, Patricia Sylla, and David L. Berger. Colon cancer surgery following emergency presentation: effects on admission and stage-adjusted outcomes, The American Journal of Surgery (2015) 209, 246-253.
8. Caetano A. dos Santos, Leonardo L.Martins, et al. Emergency surgery for complicated colorectal cancer in central Brazil, J Coloproctol. 2014;34(2):104–108

9. Razzouki H., Hadi H., Malignancies of the lower gastrointestinal tract presenting as acute abdomen, Iraqi medical journal vol. 60(1), June 2014;p36-42

10. Kızıltan R., Yılmaz O., Aras A., Çelik S., Kotan C. Factors affecting mortality in emergency surgery in cases of complicated colorectal cancer, Med Glas (Zenica) 2016; 13(1):62-67
11. . Mayor S. One in four cases of bowel cancer in England are diagnosed only after emergency admission. BMJ 2012; 345: e7117

12. Hwang H. Emergency presentation of colorectal cancer at a regional hospital. BCMJ 2012 Mar; 54(2):83-87
13. Pablo Vega, Fátima Valentín, Joaquín Cubiella, Colorectal cancer diagnosis: Pitfalls and opportunities, World J Gastrointest Oncol 2015 December 15; 7(12): 422-433
14. Acher PL, Al-Mishlab T, Rahman M, Bates T. Iron-deficiency anaemia and delay in the diagnosis of colorectal cancer. colorectal disease;2003 Mar;5(2):145-8.
15. Ayala M.D., Vallejo J.D. and Fuentes A.C. Missed opportunities in early diagnosis of symptomatic colorectal cancer, REV ESP ENFERM DIG (Madrid) Vol. 104. N.° 7, pp. 343-349, 2012
16. Abdel-Razek A.H., Challenge in diagnosis and treatment of colonic carcinoma emergencies. Alexandria Journal of Medicine (2012) 48, 109–113
17. Bilgin B.C., Kahramanca S., Akin T. et al. Factors influencing cost, length of hospital stay and mortality in colorectal cancer, JBUON 2015; 20(4): 1023-1029

TABLES

Table (1): Age prevalence

		NO. of cases	%
Age(year)	<30	zero	zero
	30-40	2	4.26
	40-50	6	12.77
	50-60	15	31.91
	>60	24	51.06
Total		47	100

Table (2): Pattern of Emergency Presentation

Emergency Presentation	Perforation	14	29.79
	Obstruction	33	70.21
Total		47	100

Table (3): History of patients

Clinical history	No. of cases	%
abdominal pain	18	38.30
lost appetite	17	36.17
Bleeding per rectum	6	12.77
gaseous distension	14	29.79
Constipated (hard stool)	19	40.43
Diarrhea	3	6.38
Alternates between diarrhoea and constipation	13	27.65
Use of an enema	16	34.04
History of performing colonoscopy	4	8.51
Weight loss	9	19.14
The previous blood test showed anaemia	7	14.89
smoking	26	55.31
Chronic medical illness	39	82.97
Family history of cancer	6	12.77

Note: the patient may have one or more findings in the history.

Table (4): Intraoperative Findings – Site Distribution of Colorectal Tumours

Intraoperative findings		NO. of cases	%
Site of the tumo	ur: right colon	7	14.89
	Transverse colon	5	10.64
	Left colon	17	36.17
	rectum	18	38.30
Total		47	100

Table (5): Frequency of early post-operative morbidity.

	No. A	%	No. B	%	No. C	%	Total	%
Morbidity	7	14.89	6	12.77	2	4.26	15	31.91

(A) Cases post-definitive surgery
(B) Cases post-staged resection
(C) Cases post-palliative surgery

Table (6): Histopathological staging.

		NO. of cases	%
Histopathology	adenocarcinoma	47	100
Dukes classification	A	1	2.13
	B	3	6.38
	C	13	27.66
	D	30	63.83