

A Single Centre Retrospective Evaluation of Colorectal Cancer Resection at Nasser Institute Hospital

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Abstract

Background: Several studies compared right to left sided colon cancers, the conclusion was that right-sided tumors carry a worse prognosis than left-sided ones, and even some authors went more in considering them two distinct tumors that should be treated in a different manner.

Aim of Study: The aim of this study was to delineate colorectal cancer age and sex distribution, pathologic pattern at time of resection of cases admitted to Nasser Institute Hospital in the period between Jan. 2018 and Dec. 2019.

Patients and Methods: This is a retrospective study conducted at histopathology department of Ain Shams University hospital by collecting the data from histopathological reports of 114 patients who underwent surgical resection of colorectal cancers in colorectal unit in Nasser Institute Hospital during the period from Jan. 2018 to Dec. 2019.

Results: This study included 86 patients who underwent any type of colorectal resection for their malignant lesion and underwent pathological assessment for their excised specimens in Nasser Institute Hospital in the period between January 2018 and December 2019. Totally 114 patients underwent colorectal resections in this period, Benign tumors were found in 28 patients out of 114 (25%), while malignant tumors were found in 86 out of 114 (75%).

Key Words: *Colorectal cancer resection.*

Introduction

COLORECTAL cancer (CRC) is a global health burden, accounting for almost 700.000 deaths per year worldwide, and it is considered the third most commonly diagnosed cancer worldwide and second in Europe [1].

CRC global incidence and mortality rates appear to be substantially higher for males than for females, with 21 new cases and 10.5 deaths per 100000 population compared to 17.6 new cases and 9.2

deaths respectively. In males, CRC ranks third in incidence, following lung and prostate cancers, and in females it ranks second, following breast cancer [2].

Epidemiology of colon cancer differs in each country. There is a paucity of studies discussing the behaviour of this common cancer in Egypt. Two decades have passed since this study, at this time a major change occurred in our understanding of cancer patterns in Egypt, with the publication of the first national population-based cancer registry in 2014, and also urbanization and change lifestyles should have affected colon cancer pattern [3].

CRC incidence increases with age, and cases are fairly uncommon before the 4th decade of life. This is the reason why most screening programs are targeted to people over 50 years old. Nevertheless, recent studies have revealed an alarming increase in incidence between the ages 40 to 44, prompting consideration of lowering the recommended screening age [4].

Mortality rates have progressively declined in most economically developed countries, in contrast with poorer regions of the world, where mortality is either stable or increasing. This reflects the diversity in screening services accessibility, specialized care and lifestyle risk factors. The highest reported mortality rates are in Central-Eastern Europe, although the highest incidence to mortality ratio is observed in Middle-Western Africa [5].

Several studies compared right to left sided colon cancers, the conclusion was that right-sided tumors carry a worse prognosis than left-sided ones, and even some authors went more in considering them two distinct tumors that should be treated in a different manner [6].

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Aim of study:

The aim of this study was to delineate colorectal cancer age and sex distribution, pathologic pattern at time of resection of cases admitted to Nasser Institute Hospital in the period between Jan. 2018 and Dec. 2019.

Patients and Methods

This is a retrospective study conducted at Nasser Institute hospital by collecting the data from histopathological reports of 114 patients who underwent surgical resection of colorectal cancers in colorectal unit in Nasser Institute hospital during the period from Jan 2018 to Dec 2019.

Inclusion criteria:

All resected colorectal cancers in colorectal unit at Nasser Institute Hospital who underwent pathological assessment in Nasser Institute Hospital.

Exclusion criteria:

Any pathology reports done outside Nasser Institute Hospital beside any resected cancers outside Colorectal unit at Nasser Institute Hospital.

Study procedure:

We collected the data of 114 patients who underwent any type of colorectal resection and pathological assessment in Nasser Institute Hospital in colorectal unit. In addition, histopathological reports were revised in terms of adequacy of resection and quality of reports.

Definition of adequacy of resections:

The proximal and distal margins should be free and the resected lymph nodes should be at least 12 lymph nodes.

Items should be fulfilled in histopathological reports:

The histopathological reports should be fulfilled by full oncological data as well as gross and microscopic pictures. In addition to comments on the proximal and distal margins, lymph nodes retrieval, effect of neoadjuvant therapy if the patient received it. Besides, TNM classification and lympho-vascular invasion. Collected data were analyzed in excel sheet.

Statistical analysis:

The collected data were revised, coded, tabulated, and introduced to a PC using statistical package for social science (SPSS 15.0.1 for windows; SPSS Inc, Chicago, IL, 2001). Data was

presented as Mean and Standard deviation (\pm SD) for quantitative parametric data, and Median and Interquartile range for quantitative non parametric data. Suitable analysis was done according to the type of data obtained. Student *t*-test analyses quantitative data while chi square test and fisher exact test was used to analyse qualitative data. *p*-value <0.05 was considered statistically significant.

Results

This study included 86 patients who underwent any type of colorectal resection for their malignant lesion and underwent pathological assessment for their excised specimens in Nasser Institute Hospital in the period between January 2018 and December 2019. Totally 114 patients underwent colorectal resections in this period, Benign tumors were found in 28 patients out of 114 (25%), while malignant tumors were found in 86 out of 114 (75%).

Table (1): Specimen nature.

Specimen nature	N=114	
	N	%
Benign tumors	28	25.0
Malignant tumors	86	75.0

Patient's ages ranged from 16 up to 92 years old with a mean age and standard deviation of 55.8 ± 13.1 years old. Forty-nine cases (57%) were males while the rest were females (43%).

Table (2): Age and gender distribution among patient's population with malignant tumors.

Demographic data	N=86	
	N	%
Age:		
0-9	0	0.0
10-19	1	1.2
20-29	1	1.2
30-39	8	9.3
40-49	16	18.6
50-59	26	30.2
60-69	22	25.6
70-79	9	10.5
80 and above	3	3.5
Sex:		
Male	49	57.0
Female	37	43.0

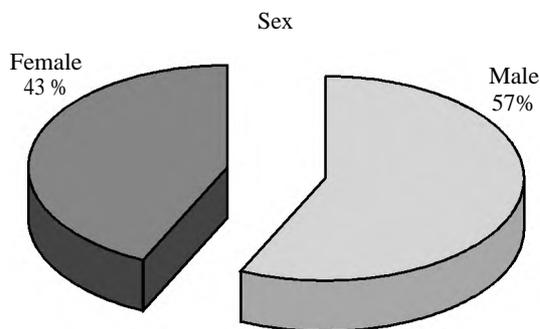


Fig. (1): Gender distribution among patients' population with malignant tumors.

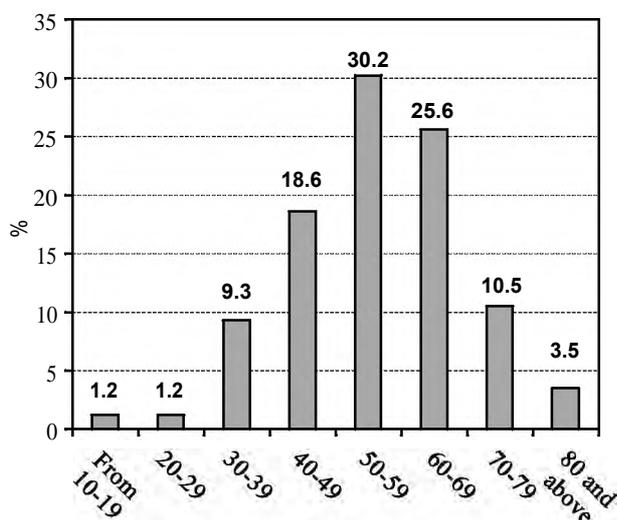


Fig. (2): Age distribution among patients' population with malignant tumors.

Many procedures of colorectal resections were done according to the site of the lesion. Right hemicolectomy was the most common procedure that was by about a third of cases (32/out of 86). Other procedures were anterior resection, sigmoid colectomy, left hemicolectomy, abdominoperineal resection, Anterior pelvic exenteration transverse colectomy and total colectomy.

Table (3): Performed surgical procedures.

Procedure	N=86	
	N	%
Rt. Hemicolectomy	32	37.2
Anterior resection	17	19.8
Sigmoid colectomy	15	17.4
Lt. hemicolectomy	11	12.8
Abdominoperineal resection	3	3.5
Anterior pelvic exenteration	3	3.5
Transverse colectomy	3	3.5
Total colectomy	2	2.3

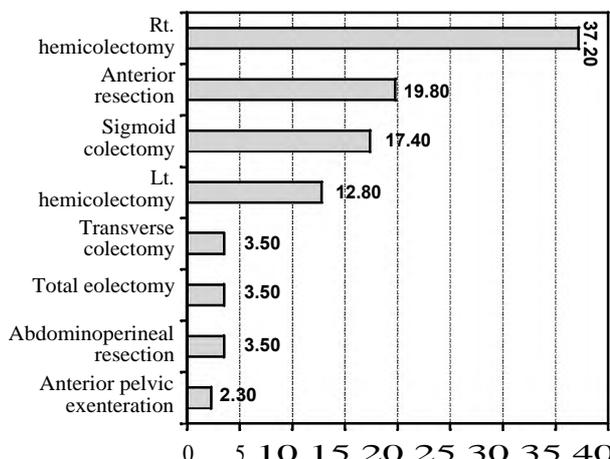


Fig. (3): Performed surgical procedures.

According to the site of the tumor in this study, the tumor was located in the right colon in 32 cases out of 63 cases with cancer colon, 3 in transverse part, 11 cases of left colon down to the sigmoid and 15 cases at sigmoid colon, and 23 cases with malignant tumors at rectum and anal canal.

Table (4): Tumor site.

Tumor site	N=86	
	N	%
Right colon	32	37.2
Transverse colon	3	3.5
Left colon	11	12.8
Sigmoid colon	15	17.4
Rectum and Anal canal	23	26.7
Unspecified part of colon	2	2.3

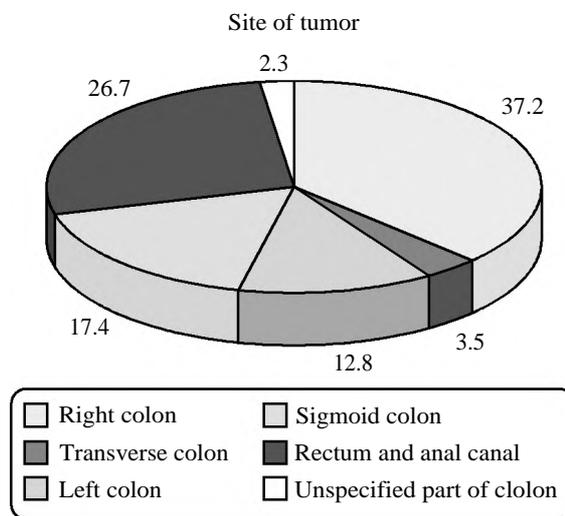


Fig. (4): Site of tumor.

Different histological types were recorded in this study; most cases were moderately differentiated adenocarcinoma (82 out of 86 cases), followed by both mucinous adenocarcinoma (2 cases) and lymphoma (2 cases).

Table (5): Types of resected tumors.

Pathological pattern	N=86	
	N	%
Adenocarcinoma	82	95.3
Lymphoma	2	2.3
Mucinous carcinoma	2	2.3

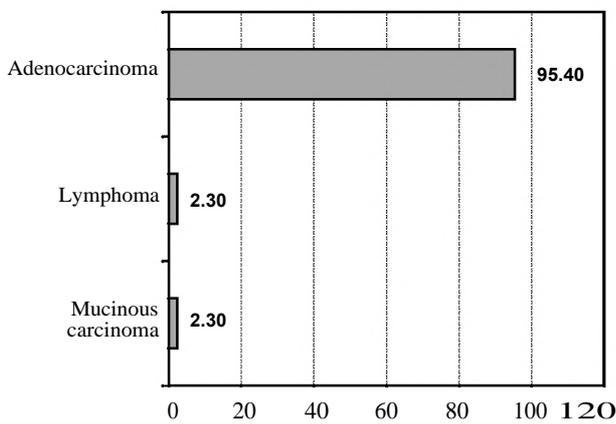


Fig. (5): Types of resected tumors.

Different tumors grades were recorded in this study; most cases were moderately differentiated grade II (78 out of 86 cases), followed by grade III (4 cases), as well as grade IV (2 cases) and regarding to grade I no cases were found in this study.

Table (6): Tumor's grading.

Grading	N=86	
	N	%
II	78	92.9
III	4	4.8
IV	2	2.4

Regarding the relation between the age of patients and the grading of the tumor found in this study, we found the commonest age range diagnosed with tumor grade II [which is in the majority of cases (78 out of 86)] is 50-59 years old by 32.1 % followed by 60- 69 years old by 25.6% then patients ranges 40-49 comes with 19.2% followed by patients ranges 70-79 years old by 10.3% then whom ranges 30-39 years old by 7.7% then patients above

80 years old and 20-29 years came by 3.8% and 1.3% respectively. Grade III comes in the second place by 4 cases, 2 cases were 60-69 years old, 1 case was 50-59 years old and the other case was 70-79 years old. Grade IV came last by 2 cases; one case was 10-19 years old and the other was 40-49 years old.

Table (7): Relation between age and grade of tumor grade.

Age	Grade II		Grade III		Grade IV	
	N	%	N	%	N	%
10-19	0	0.0	0	0.0	1	50.0
20-29	1	1.3	0	0.0	0	0.0
30-39	6	7.7	0	0.0	0	0.0
40-49	15	19.2	0	0.0	1	50.0
50-59	25	32.1	1	25.0	0	0.0
60-69	20	25.6	2	50.0	0	0.0
70-79	8	10.3	1	25.0	0	0.0
80 and above	3	3.8	0	0.0	0	0.0

Regarding the relation between sex and the grading of the tumor found in this study, the majority of grade II tumors were found in female patients (45 out of 78 cases). The male: female ratio in patients with tumor grade III was 3:1. 2 cases with grade IV, one was a male and the other was a female.

Table (8): Relation between sex and tumor grade.

Grading	Males		Females	
	N	%	N	%
II	33	89.2	45	91.8
III	3	8.1	1	2.0
IV	1	2.7	1	2.0

Different tumors stages were recorded in this study; most cases were T3 (58 out of 86 cases), followed by T4 (19 cases), T2 (8 cases) and T1 (1 cases).

Table (9): Tumors staging.

Staging	N=86	
	N	%
T1	1	1.1
T2	8	9.3
T3	58	67.4
T4	19	22.2

Regarding the relation between age ranges and tumor staging, we found the commonest age range diagnosed with T3 tumor [which is in the majority of cases (58 out of 86)] is 50-59 years old by 29.5% followed by 60-69 years old by 25% then patients range 40-49 comes with 15.9% followed by patients ranges 70-79 as well as 30-39 years old by 11.4% then patients above 80 years old and 10-19 years came by 4.5% and 2.3% respectively. T4 tumors came in the second place by 19 out of 86 cases, 40-49 years old patients where 35.7% then 60-69 years old patients were 21.4%. 2 cases in 30-39 and 50-59 years old respectively. 1 case in ranges 20-29 and 70-79 years old respectively. T2 tumors came in the third place by 3 cases in the range 50-59 years old and 1 case in ranges 40-49, 60-69 and 80 and above respectively.

Table (10): Relation between age and tumor stage.

Age	T1		T2		T3		T4	
	N	%	N	%	N	%	N	%
10-19	0	0.0	0	0.0	1	2.3	0	0.0
20-29	0	0.0	0	0.0	0	0.0	1	7.1
30-39	0	0.0	0	0.0	5	11.4	2	14.3
40-49	0	0.0	1	16.7	7	15.9	5	35.7
50-59	0	0.0	3	50.0	13	29.5	2	14.3
60-69	0	0.0	1	16.7	11	25.0	3	21.4
70-79	1	100.0	0	0.0	5	11.4	1	7.1
80 and above	0	0.0	1	16.7	2	4.5	0	0.0

Adequate lymph nodes dissection is at least 12 lymph nodes. The majority of the cases were adequately lymph node dissected (63 out of 86 cases), while the remaining cases were inadequately lymph nodes resected (23 cases).

Table (11): Adequacy of lymph nodes dissection.

Adequacy of lymph nodes dissection	Total	
	N	%
Adequate	63	73.3
Inadequate	23	26.7

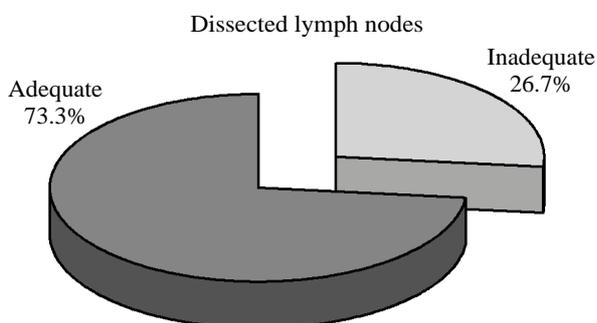


Fig. (6): Adequacy of lymph nodes dissection.

Regarding to histopathological results for lymph nodes harvesting, Cases with positive lymph nodes were 46.51% (40 out of 86 cases) while the remaining cases were negative (46 out of 86 cases).

Table (12): Lymph nodes histopathology results.

Histopathological results for dissected lymph nodes	Total	
	N	%
Positive	40	46.51
Negative	46	53.49

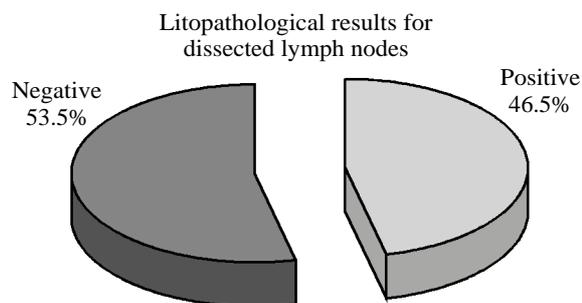


Fig. (7): Lymph nodes histopathology results.

Lympho-vascular invasion is one of most important prognostic criteria in colorectal cancer, this was detected in only 29 cases of this study, which represent about 34.5% of the total cases. The remaining cases, lympho-vascular invasion was either negative (35 out of 86 cases) or not detected (1 out of 86 cases) or not mentioned in the histopathological reports (19 out of 86 cases).

Table (13): Lympho-vascular invasion.

Lymph vascular invasion	N=86	
	N	%
Positive	29	34.5
Negative	35	41.7
Not detected	1	1.2
Not mentioned	19	22.6

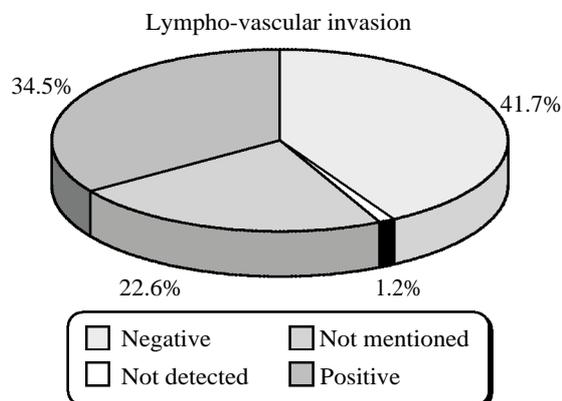


Fig. (8): Lympho-vascular invasion.

Peri-neural invasion also is considered one of the prognostic criteria of CRC. Peri-neural invasion was recorded in 17 cases, while 47 cases were free, with a single case cannot be assessed, and 19 cases not mentioned.

Table (14): Peri-neural invasion.

Perineural invasion	N=86	
	N	%
Positive	17	20.2
Negative	47	56
Not detected	1	1.2
Not mentioned	19	22.6

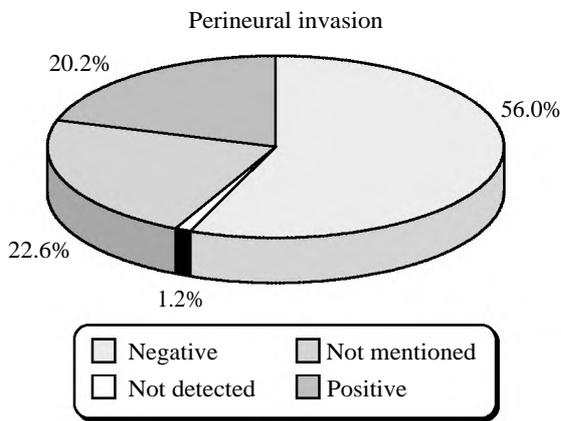


Fig. (9): Peri-neural invasion.

Regarding the adequacy of resection, in this study there were 81 (96.4%) cases with free surgical margins while 3 cases only had infiltrated surgical margins.

Table (15): Margin status of the resected specimen.

Surgical margins	N=86	
	N	%
Free margins	81	96.4
Infiltrated margins	3	3.6

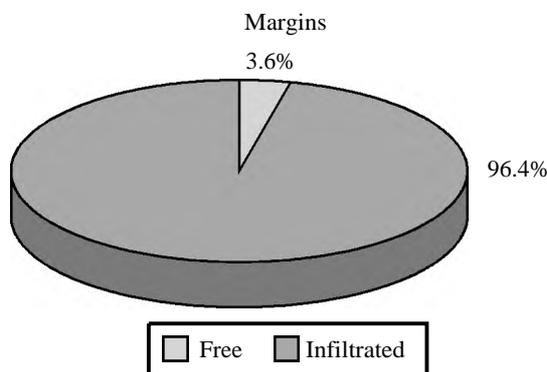


Fig. (10): Margin status of the resected specimen.

Regarding the procedure's nature we found that elective procedures were the majority (69 out of 114), while the remaining were emergency procedures.

Table (16): Procedure's nature.

Procedure's nature	N=114	
	N	%
Elective	69	60.5
Emergency	45	39.5

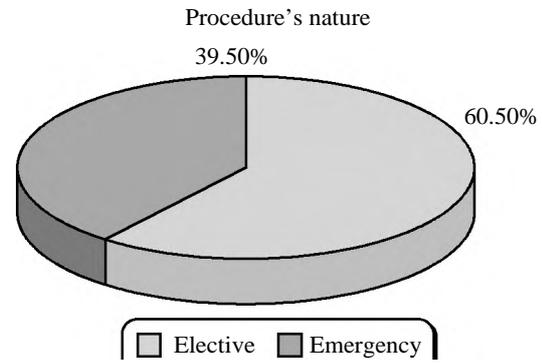


Fig. (11): Procedure's nature

Among elective procedures, 91.3% of the specimens (63 specimens out of 69) were malignant compared to 51.1% (23 out of 45) among the emergency procedures.

Table (17): Relation between procedure's nature and specimen nature.

Specimen nature	Elective		Emergency	
	N	%	N	%
Benign	6	8.7	22	48.9
Malignant	63	91.3	23	51.1

Recently, Neoadjuvant therapy has a mandatory role in the outcome of the management of CRC especially rectal cancer. In our study, total patients who had received neoadjuvant therapy were 31 patients (22 patients with colon cancer and 9 patients with rectal cancer). Regarding to previous pre-therapy histopathological reports of these patients, various responses were noticed. Regarding to the patients with colon cancer, Moderate response in 12 cases, minimal response was noticed in 6 cases and poor response in 4 cases. While patients with rectal cancer, we found moderate response in 5 cases, minimal response in 2 cases and poor response in 2 cases.

Table (18): Response to neoadjuvant therapy in colon cancer.

Response to neoadjuvant therapy	N	%
Minimal response	6	27.3
Moderate response	12	54.5
Poor response	4	18.2

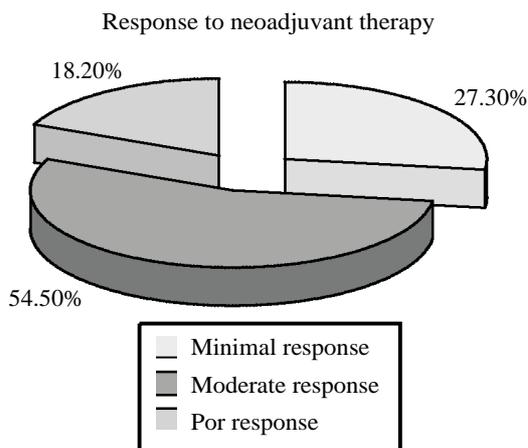


Fig. (12): Response to neoadjuvant therapy in colon cancer.

Table (19): Response to neoadjuvant therapy in rectal cancer.

Response to neoadjuvant therapy	N	%
Minimal response	2	22.2
Moderate response	5	55.6
Poor response	2	22.2

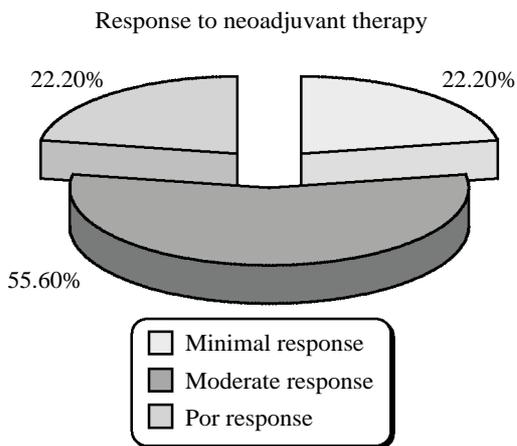


Fig. (13): Response to neoadjuvant therapy in rectal cancer.

Quality of histopathological assessment is very important in management and decision. In our study, it was observed that 78.0% of pathology reports were fulfilling the criteria of qualified reports but only 22.0 % were missing some data.

Table (20): Report quality.

Quality of report	N	%
Fulfilling	67	78.0
Missing	19	22.0

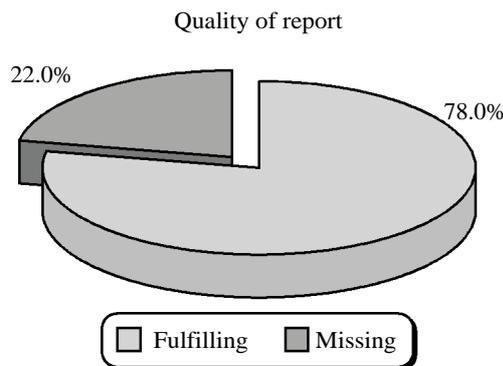


Fig. (14): Quality of report.

Discussion

Colorectal cancer is the third most common malignancy in men, the second most common malignancy in women, and the fourth most significant cause of death from malignant neoplasms in the world [7].

Our study included 86 patients who underwent any type of colorectal resection for their malignant lesions. Patient's ages ranged from 16 up to 92 years old with the mean age and standard deviation of 55.8 ± 13.1 years old. This median of age was less than that observed in other studies as in Hochster et al. [8] in USA who worked on about 21,925 patients with mean age 63 year, also less than Zafar et al. [9] with 64 years old median age of 682 patients and close to Ghahramani et al. [10] in Iran who worked on 250 patients with median age 54 years old. That may indicate that the incidence of colorectal cancers occurs in younger age group in Egypt.

Gender distribution in our study shows males prevalence (49 out of 86) 57%, which is near the finding of Murphy et al. [11] in USA who worked on 927 with 54.2% male predominance and Johnson et al. [12] in USA who studied 569 with also 54% male incidence rate, but slight less than Brule et al. [13] in Canada, 60.9% male predominance. That also was higher than Tonini et al. [14] in Italy who revealed slight male predominance by 50.8% that may suggest the incidence of cancer colon was slightly higher in males, especially that we didn't find a study shows female predominance totally in cancer colon.

According to tumor location, the most common site in this study is right colon tumors which accounts for 37.2%, exactly like in USA Watson et al., who reported (38%) of right colon tumors of total cases. The left colon, includes tumor located from the splenic flexure down before the recto-sigmoid junction, was by about 12.8% of cases. That much less than the prevalence of left colonic tumors location represented in other studies worked on a large group of patients as in Siegel et al. [15] in USA that worked on more than 132000 patients but much less than the results of Johnson et al. [12] in USA who published higher incidence rate 60 % of incidence of left side large gut cancers. Regarding to Ano-rectal tumors, in this study was 26.7% which is approximately close to Gravante et al. [16] in Italy who reported (30.4%) of rectal tumors of total cases.

Regarding the procedure of colectomy, we could observe that the right hemicolectomy was the most common operation 37.2% in this study and that was confirming the notification of Tonini et al. [14] who recorded the highest incidence for right hemicolectomy by 39% and Gravante et al. [16] with 39.7% right hemicolectomy in Italy and also like Metwally et al. [17] which the study conducted in Egypt who reported 33% of right hemicolectomy.

Regarding the rectal procedures, we observed that the anterior resection was the most common operation 73.9% in this study and that was confirming the notification of Kang et al. [18] in Korea, who recorded the highest incidence for anterior resection by 78.4% and slightly lower in United Kingdom where Luvisetto et al. [19] found that anterior resection was 64.8% (170 out of 262 patients).

Histopathological examination revealed in our study that 82 cases (about 95.3%) were moderately differentiated adenocarcinoma compared to (74.9%) reported in USA by Shen et al. [20], while mucinous type of adenocarcinoma was reported in 2 cases (2.3%) as the 2nd most common pathological type, that accommodates with the study of Catalano et al. [21] in Italy who worked on 255 patient's specimens, 19% of them was mucinous adenocarcinoma.

This is consistent with El-Hawary et al. [22] study in Egypt showing excess mucinous carcinoma among Egyptians, especially signet ring variant in comparison with the world rates. Similarly, reported that, the most common histological type is adenocarcinoma, the proportion reported in the other Maghreb Housse et al. [23], Middle East and Asian

countries (73.4% in Niger, 82% in Morocco, 84.6% in Jordan). In addition, according to Veruttipong et al. [24] in Egypt, adenocarcinoma was the most common histopathologic type of tumors (87.0%). In harmony with our study, in Khiari, [25] found adenocarcinoma was the most common histological type.

Similar results were reported in Egypt by Metwally et al. [17], found that, postoperative pathology showed classic adenocarcinoma in 64.2% of cases, colloid adenocarcinoma in 22%, and signet ring carcinoma in 6.1%. While another 6.1% showed adenocarcinoma with mucinous activity <50%, and only two cases showed neuroendocrine differentiation and one case had anaplastic carcinoma.

In our study, most cases were moderately differentiated grade II (78 out of 86 cases), followed by grade III (4 cases) and lymphoma (2 cases). In addition, according to Veruttipong et al. [24] who conducted his study in Egypt the majority of tumors were grade II moderately-differentiated tumors (51.5% of cases) followed by 11.4% grade III. About 25.7% cases had no grade information. In Egypt, similar results were reported by Metwally et al. [17] found that, about 53% of cases are of moderate grade.

Many Stages of the disease were recorded through our patients. In current study, most cases were T3 (67.4%), followed by T4 (22.2%), T2 (9.3%) and T1 (1.1%). That percentage agreed with Tonini et al. [14] who explained the results of incidence of T3 (53.3%) among the resected colorectal cancers out of 643 specimens in Italy. It was also close to Amajoyi et al. [26] in USA who noticed 50% of 502 patients were in T3 stage, 23% in T2 and 6% T4 tumors.

According to National Comprehensive Cancer Network (NCCN) guidelines and American Joint Committee on Cancer about adequacy of resection in CRC, it is considered adequately resected specimens that showed free longitudinal and circumferential surgical margins in addition to excision of at least 12 lymph nodes Tonini et al. [14] in Italy. Adequate resection obtained in about 73.3% of all cases included in this study, that higher than the results achieved in Italy by Cianchi et al. [27], the study that report 60.3% of 551 cases were adequately resected. Other studies showed a similar percentage of adequate resection, as in USA Senthil et al. [28] who achieved 74% and Gravante et al. [16] who presented 69.1 % in UK.

The extent of lymph node involvement is the most important prognostic factor in resected loco-

regional colorectal cancer. 50.75% of our total study cases showed lymph nodes infiltration. This rate of infiltration is higher than Johnson et al. [12] in USA who recorded (38%) of 219 patients had one or more positive lymph nodes identified. This result is also higher than Tonini et al. [14] who had 40 % of positive lymph nodes infiltration in Italy. Similar results in Egypt were reported by Metwally et al. [17] found that, number of lymph nodes retrieved ranges from 0 to 69 with median 10, but unfortunately 54% of patients have less than 12 nodes retrieved (inadequate lymphadenectomy).

One of the important prognostic criteria is the lympho-vascular invasion, this was detected in only 29 cases of this study, which represent about 34.5% of the total cases. This percentage was higher than Betge et al. [29] who announced 23% of venous invasion and 33% of lymphatic invasion in Austria and less than Higgins et al. [30] vascular invasion was present in 62 (48.1%) of specimens in USA. In another study in UK reported 28% of his cases were positive for lympho-vascular invasion.

Perineural Invasion (PNI) is one of the important prognostic criteria, this was detected in only 17 cases of this study, which represent about 20.2% of the total cases. This percentage was similar to Cao et al. [31] in China, who announced 21.5% of PNI (out of 1412 cases) and higher than Kinjin et al. [32] in Netherland, PNI was present in 18.2% (out of 22900 cases) of specimens. In another study in USA Tang et al. [33] reported 10.59% of his cases (out of 406 cases) were positive for PNI. This may indicate late detection of the disease in our study.

About resection margins infiltration, in our study, 81 (96.4%) cases have free margins while 3 cases were infiltrated. that value was equal to Tonini et al. [14] in Italy who announced 87.3% of 615 patients with free resection margins. In Egypt also results were reported by Metwally et al. [17] found that, Margins were free in about 71% of patients, no data in about 25%, infiltrated distal margin in 9 cases (one retreated by redo) and infiltrated radial margin in only 2 cases.

A significant number of patients with colorectal cancer will have an emergency presentation requiring surgery, in our study, 23 (33.8%) cases underwent emergency procedures. that value was higher than Lavanchy et al. [34] in Switzerland, who announced 22 % of 475 patients underwent emergency procedures. Also results were reported by Lee et al. [35] in Australia found that, 13.6% of 15676 cases were emergency cases.

Neoadjuvant therapy (NAT) comprises a combination of radiotherapy and chemotherapy. The European Society of Medical Oncology (ESMO) recommend neoadjuvant therapy in cases of advanced disease (> T3), lymph node involvement on imaging and where the adequacy of TME surgery is in question (circumferential resection margin) as reported by Glynne-Jones et al. [36].

The goal of NAT is to downsize or downstage the tumour in anticipation of surgical resection. In instances where there is involvement of the anal sphincters, successful NAT can potentially downsize a tumour, to allow for the creation of a safe resection margin thereby preserving the anal sphincters and maintaining anal continence. In certain cases, tumours may completely respond to NAT. Complete Response is defined as the replacement of tumour with fibrous tissue post-radiotherapy as proved by Lorimer et al. [37] in USA.

Regarding to colon cancer, in our study we found patients received NAT were 22 out of 63 patients (34.92%). There were variant responses, 54.5% showed moderate response, 27.3% showed minimal response and 18.2% showed poor response. In UK, Clarke et al. [38] found that 12.3% only (out of 73 cases) showed good response. In India, found that 14.8% only (out of 430 cases) showed good response. Much lower, Arredondo et al. [39] in Spain, found that only 4.6% (out of 65 cases) showed pathologic complete response.

Regarding to rectal cancer, in our study we found patients received NAT were 9 out of 23 patients (39.13%). There were variant responses, 5 cases showed moderate response, 2 cases showed minimal response and 2 cases showed poor response. In Italy, Petrelli et al. [40] found that 22.4% (out of 3579 cases) showed good response. Much lower, Kasi et al. [41] in USA, found that 29.9% (out of 2416 cases) showed pathologic complete response.

The reports were analysed for completeness according to 10 key prognostic features included in the College of American Pathologists (CAP) checklist for the reporting of colorectal cancer. These features included tumor size (in greatest dimension), TNM stage, histologic type, histologic grade, circumferential radial margin (CRM) involvement, distance to the CRM, lympho-vascular invasion (LVI), extramural venous invasion (EMVI), PNI, and regional tumor deposits said.

A good quality histopathology report will facilitate decision for post-operative adjuvant therapy and predict outcome in patients with colorectal

cancer A good quality histopathology report will facilitate decision for post-operative adjuvant therapy and predict outcome in patients with colorectal cancer A good quality histopathology report will facilitate decision for post-operative adjuvant therapy and predict outcome in patients with colorectal cancer. We noticed that 78% of our pathology reports were fulfilling the criteria of qualified reports giving the full data needed. This is lower than the results in UK proved by Siriwardana et al. [42] who declared 9% had one or more items missing from their report.

Epidemiology of colon cancer differs in each country. There is a paucity of studies discussing the behavior of this common cancer in Egypt, the largest of which is Abou-Zeid et al. [43]. Two decades have passed since this study, at this time a major change occurred in our understanding of cancer patterns in Egypt, with the publication of the first national population-based cancer registry in 2014, and also urbanization and change lifestyles should have affected colon cancer pattern.

In order to estimate the scale of our study, we should bear in mind that our hospital is located in Cairo city (capital of Egypt, largest governorate in Egypt), with a population in the governorate approaching 10 million.

Conclusion:

Cancers of the colon and rectum are among the most common and deadly neoplasms, and their global incidence and mortality are likely to increase in the coming decades. In Egypt, because of a lack of population-based cancer registries, calculation of cancer incidence and statistics depends on population mortality and hospital morbidity statistics which make accurate determination of CRC incidence was difficult.

Our study showed that CRC is not uncommon among Egyptian patients and CRC rates are high in patients >40 years of age. This high prevalence in the young can be explained by neither hereditary basis nor can it be attributed to bilharziasis. The most affected subsites were respectively the rectum, proximal then distal colon. Commonly, adenocarcinoma was the most common histological type.

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دراسة تقييمه بأثر رجعي لاستئصال سرطان القولون والمستقيم في مستشفى معهد ناصر

يعد سرطان القولون والمستقيم أحد أكثر أنواع السرطان التي يتم تشخيصها بشكل شائع في كل من الرجال والنساء. تحتل المرتبة الثالثة بين أكثر أنواع السرطانات شيوعاً بين الرجال وثاني أكثر أنواع السرطان شيوعاً بين النساء على مستوى العالم. يظهر حدوث هذا الورم الخبيث تبايناً كبيراً بين السكان مختلفي الأعراق في البلدان متعددة الأعراق.

أثير الاهتمام مؤخراً في مصر بسرطان القولون والمستقيم عندما كشفت الملاحظات الشخصية والدراسات الوبائية عن ارتفاع معدل الإصابة بالمرض بين الشباب المصري.

تضمنت دراستنا ٨٦ مريضاً خضعوا لأي نوع من استئصال القولون والمستقيم بسبب ورم خبيث. تراوحت أعمار المريض من ١٦ إلى ٩٢ عاماً مع متوسط العمر والانحراف المعياري ٥٥.٨ ± ١٣.١ عاماً.

يظهر التوزيع الجنسي للمرضى في دراستنا انتشار الذكور (٤٩ من ٨٦)، مع غلبة الذكور.

وفقاً لمكان الورم، فإن المكان الأكثر شيوعاً في هذه الدراسة هو القولون الأيمن والتي تمثل ٣٧.٢٪. بينما القولون الأيسر والذي يبدأ من الثنية الطحالية لأسفل قبل التقاطع المستقيم السني، بحوالي ١٢.٨٪ من الحالات بينما كانت أورام الشرج ٢٦.٧٪ من إجمالي الحالات.

كان استئصال النصف الأيمن هو الإجراء الأكثر شيوعاً الذي تم إجراؤه في مدة الدراسة حيث كان ٣٢ من أصل ٨٦ مريضاً، يليه ٢٣ حالة مصابة بأورام خبيثة في المستقيم والقناة الشرجية، و ١٥ حالة في القولون السني، و ١١ حالة في القولون الأيسر وأخيراً ٣ في القولون المستعرض.

من حيث الفحص النسيجي كانت معظم الحالات عبارة عن سرطان غدي معتدل التباين (٨٢)، يليه سرطان غدي مخاطي (حالتان) وسرطان الغدد الليمفاوية (حالتان).

كانت معظم الحالات من الدرجة الثانية معتدلة التباين (٧٨ من ٨٦ حالة)، تليها الدرجة الثالثة (٤ حالات) وسرطان الغدد الليمفاوية (حالتان).

فيما يتعلق بكفاية استئصال الغدد الليمفاوية، ٧٣.٣٪ (٦٣ من ٨٦ حالة) كانت كافية و ٢٦.٧٪ (٢٣ من ٨٦ حالة) كانت غير كافية.

كان الفحص الباثولوجي للعقد الليمفاوية المحصودة إيجابياً في ٤٦.٥١٪ (٤٠ من ٨٦ حالة) بينما كان سلبياً في ٤٩.٢٥٪ (٤٦ حالة).

في دراستنا، أحد معايير الإنذار هو غزو الأوعية الليمفاوية، وقد تم إكتشاف ذلك في ٢٩ حالة فقط (٣٤.٥٪) من إجمالي الحالات. تم تسجيل الغزو حول العصب في ١٧ حالة، بينما كانت ٤٧ حالة خالية، مع حالة واحدة لا يمكن تقييمها، و ١٩ حالة غير مذكورة. ٨١ (٩٦.٤٪) من الحالات بهامش استئصال خالي من وجود أورام بينما ٣ حالات فقط تبين وجود ورم بهامش الاستئصال.

في دراستنا، كانت الجراحة الاختيارية هي معظم الإجراءات (٦٩ من ١١٤)، وكانت نتيجة الفحص النسيجي خبيثة في ٩١.٣٪ (٦٣ مريضاً) مقارنة بـ ٥١.١٪ (٢٣ من ٤٥) من بين الجراحة الطارئة.

في هذه الدراسة في مرضى سرطان القولون، تلقى ٢٢ مريضاً من أصل ٦٣ علاج كيميائي - إشعاعي ما قبل الإجراء الجراحي ولوحظ الحد الأدنى من الاستجابة في ٦ مرضى، واستجابة ضعيفة في ٤ حالات وأظهرت الحالات الـ ١٢ الباقية استجابة معتدلة.

بينما في مرضى سرطان الشرج والمستقيم، تلقى ٩ من ٢٣ مريضاً علاج كيميائي - إشعاعي ما قبل الإجراء الجراحي ولوحظ الحد الأدنى من الاستجابة في مريضين، واستجابة ضعيفة في حالتين وأظهرت الحالات الخمس الباقية استجابة معتدلة.

يسهل تقرير الفحص النسيجي عالي الجودة اتخاذ القرار بشأن العلاج المساعد بعد الجراحة والتنبؤ بالنتائج في مرضى سرطان القولون والمستقيم. لاحظنا أن ٧٨٪ من تقارير الفحص النسيجي لدينا تفي بمعايير التقارير المؤهلة التي تعطي البيانات الكاملة المطلوبة.