

RESEARCH ARTICLE

Clinical Characteristics of Patients with Colon Cancer

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Abstract: **Background:** Colon cancer is the third leading cause of cancer morbidity and mortality in the world. **Objectives:** To investigate the clinical characteristics of patients with colon cancer. **Methods:** A cross-sectional descriptive study was used to analyze the characteristics of colon cancer patients in the Service of General Surgery of Military Hospital Octavio de la Concepción y la Pedraja from October 2013 to August 2017. The universe consisted of 61 patients with colon cancer. **Results:** The study was mainly female, and the patients over 60 years old accounted for the majority, especially the patients in the age group of 70–79 years old. Villous adenoma was the most common history. Low gastrointestinal bleeding was the main manifestation of left tumor patients. Most cancers were well differentiated. Adenocarcinoma was the most common histological type. **Conclusion:** Villous adenoma was the main pathological history of women aged 70–79. Lower gastrointestinal bleeding was the most common clinical manifestation, which was related to left position. Some patients need surgical treatment, and the most commonly used technique was left hemicolectomy. Most tumors were well differentiated with chronic inflammation.

Keywords: Colon neoplasms/surgery, Adenocarcinoma, Endoscopic sphincterotomy, Aged, Cross sectional study

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1. Introduction

As a public health problem, colorectal cancer is becoming more and more serious all over the world. Increased life expectancy of the population, increased exposure to recognized carcinogens, expanded coverage of health programs, improving screening techniques and active case finding have all contributed to the annual increase in the number of confirmed cancer cases globally. According to the National Institute of Health, more than 500,000 people die from the disease in this country every year. It is estimated that around 2030, 35% of Cuba's population will suffer from malignant tumors^[1-3].

Colon cancer is the third most common cause of cancer morbidity and mortality in men and women in the world. By 2008, the standardized morbidity and mortality rates per 100,000 person-years were 17.2% and 8.2% respectively. Colon cancer is a major public health problem in the world, especially in rich countries^[4,5].

Although the morbidity and mortality rates of colon cancer in the United States have decreased in recent years, it is the third most common cause of cancer death. More than 155,000 people die from this disease every year, and 140,000 new cases are diagnosed every year^[6-9].

In 2016, 2,331 patients died of colon cancer in Cuba. This is the fourth leading

cause of death from malignant tumors, with 20.7 deaths per 100,000 residents^[2-7].

The most effective treatment for this kind of tumor is surgery, which aims to remove all malignant tissues and enough healthy tissue edges, and drains lymphatic vessels at the same time, so as to minimize the related morbidity and mortality. The surgical technique in each case depends on its stage, location, presence of other colorectal lesions and extension to other organs^[10].

The prognosis of these tumors is directly related to early diagnosis and has been proved to be closely related to the extent of their penetration into the organ wall, the invasion of regional lymph nodes, the invasion of adjacent organs and the presence of distant metastasis. Therefore, staging is helpful to determine the prognosis. The occurrence of complications, usually associated with delayed diagnosis, is a fact that has a negative impact on the prognosis because of the significant increase in mortality^[11,12].

Therefore, it is decided to study and analyze the characteristics of patients with colon cancer in general surgery, in order to expand the understanding of colon cancer and the most effective treatment.

2. Methods

This study was a cross-sectional descriptive development study to describe patients with colon cancer in the Service of General Surgery of Military Hospital Octavio de la Concepción y la Pedraja from October 2013 to August 2017. The study consisted of 61 patients with colon cancer who received treatment in the Service of General Surgery during the above-mentioned period. The inclusion criteria were: diagnosed as colon cancer and confirmed by biopsy. The exclusion criteria were: unable to collect information and unconfirmed by biopsy.

2.1. Information collection and analysis

The data collected from the retrospective history of transmitted diseases were collected in tabular form, including variables such as age, gender, personal pathological background, clinical manifestations and pathological characteristics of tumors. These variables were collected for research purposes and based on retrospective theoretical information. A database was established in SPSS, which allowed processing through descriptive and inferential statistical techniques.

Descriptive statistical tools, including absolute and relative frequency distribution, proportional contrast and X^2 , were used to determine the significance of contrast, with a significance level of 95%.

3. Results

The increasing number of cancer patients poses a challenge to today's medicine. Advances in diagnostic

methods and access to drugs have shortened the time it takes to diagnose the disease early, leading to an increase in the number reported each year.

According to age group and gender distribution, women accounted for 59.01% and men accounted for 40.98%. In terms of age group, patients over 60 years old were the majority, especially in the 70–79 years old group (39.34%) (**Table 1**).

Analysis of patient distribution based on individual pathologic history showed that about one-third of the patients had no personal pathologic history related to colon cancer (29.50%). Villous adenoma was the most common history (34.42%), followed by ulcerative colitis (14.75%). Colonic diverticulosis (11.47%) and polyposis (9.83%) were less reported (**Table 2**).

According to the clinical manifestations of the tumor site, low gastrointestinal bleeding was the main manifestation of the study patients (37.60%), followed by anemia syndrome (29.50%), occlusion syndrome (24.59%) and general syndrome (8.06%). Left colon cancer was dominant (60.65%) (**Table 3**).

Table 1. Patients by age group and sex

Age group	Female		Male		Total	
	No.	%	No.	%	No.	%
40–49	1	2.6	1	2.6	2	3.27
50–59	5	8.19	3	4.91	8	13.11
60–69	9	14.75	5	8.19	14	22.95
70–79	14	22.95	10	16.39	24	39.34
80–89	6	9.83	5	8.19	11	18.03
90 and above	1	2.6	1	2.6	2	3.27
Total	36	59.01	25	40.98	61	100

Source: Medical history $p = 0.821E-02$

Table 2. Personal pathological background

Personal pathological background	No.	%
No.	18	29.50
Villous adenoma	21	34.42
Ulcerative colitis	9	14.75
Diverticulosis of colon	7	11.47
Polyposis	6	9.83
Total	61	100

Source: Medical history

Table 3. Relationship between clinical manifestations and tumor localization

Clinical manifestation	Left		Right		Total	
	No.	%	No.	%	No.	%
Lower gastrointestinal bleeding	21	34.42	2	3.27	23	37.60
Occlusive syndrome	9	14.75	6	9.83	15	24.59
Anemia syndrome	4	6.66	14	22.95	18	29.50
Syndrome	3	4.91	2	3.27	5	8.06
Total	37	60.65	24	39.34	61	100

Source: Medical history $p = 0.00E+00$

When analyzing the pathological characteristics of tumors, colon cancer was well differentiated in most patients (47.64%), and there was evidence of chronic inflammation (70.49%) (**Table 4**).

Table 4. Pathological features of breast tumors

Features	No.		%
Degree of differentiation	Well differentiated	29	47.64
	Moderate differentiation	18	29.50
	Poor differentiation	14	22.95
Chronic inflammation	Yes	43	70.49
	No	18	29.50
	Total	61	100

Source: Medical history

4. Discussions

The study found that women and patients over the age of 60 were dominant, which was consistent with what Ferreira and Melendez^[13] reported in their study. In their study, they found that the average age of patients with colon cancer was 62 years and gender was dominant. These results were consistent with those reported at work, although emergency intervention patients were included in their series.

Montes de Oca Megías *et al.*^[14] reported that the average age was 61.5 years old, mainly women. They pointed out that more than 85% of colon cancer cases occurred in people over the age of 60. In Europe, the incidence of colon cancer increased with age, which was the result of environmental and lifestyle factors, and men showed an upward trend from the age of 50.

Neuhouser *et al.*^[15], in the United States, reported that the incidence of colon cancer was similar in men and women, increasing after the age of 40, and 90% of cases occurred over the age of 50. There was a trend towards diagnosis among young people, which was one of the 10 most common diagnoses among people aged 20 to 49^[16].

Similar results were reported in the Latin American region. In Colombia, they reported that the average age of colon cancer was 54, with women predominating^[17-19].

Other authors, such as Ojima *et al.*^[20], reported in 76 studies on video endoscopic characteristics of colon cancer that the youngest patient was 26 years old, the oldest patient was 86 years old, and the average age was 62 years old, mainly patients aged 50 to 64 years old.

The existence of villous adenoma is related to the occurrence of colon cancer. Most of them, no matter what the reason, are caused by adenomatous polyps. Only adenomas are precancerous lesions, and a few adenomas turn into cancer. Systematic screening studies on population and autopsy show that more than 30% of middle-aged and elderly people can find colonic adenomatous polyps. Nevertheless, less than 1% of polyps become malignant, and a large number of polyps are asymptomatic and still have not been found

clinically^[21-24].

According to Malvezzi *et al.*^[25], the family and personal pathological background of colon cancer was an important risk factor for the development of colon cancer. They also noted that patients with a family history of colon cancer had a two to six times increased risk of colon cancer, plus the number of kinship relationships, the degree of kinship, and the age of diagnosis of the tumor. Similarly, when there was a family history of colonic adenomatous polyps, the risk increased, especially if diagnosed before the age of 60.

As for clinical manifestations, Adams *et al.*^[26] concluded that low gastrointestinal bleeding predominated in the majority of patients studied, which may be related to the main site of sigmoid colon cancer and reported similar results.

Other authors such as Hano García *et al.*^[28] reported that abdominal mass was the main finding of physical examination, and more than one third of patients were positive for palpation pain. Lynch *et al.*^[29] noted that the fecal occult blood test had high sensitivity and specificity for colorectal cancer, but not for colorectal polyps^[30].

In their work, Kwakman *et al.*^[31] pointed out that in patients diagnosed with colon cancer, the main indication of colonoscopy was bleeding, followed by anemia, abdominal pain, rectal bleeding, suspected colon cancer, chronic diarrhea, radiological suspicion, consumption syndrome, liver metastasis research, rectum syndrome, abdominal tumor, polyp monitoring and weighing.

Leake^[32] pointed out that abdominal pain, changes in intestinal habits and weight loss were the most common symptoms. Laskar *et al.*^[33] noted that distal tumors (descending colon to rectum) may be associated with abnormalities such as reduced caliber and bloody stools such as hematochezia, which were consistent with the findings of studies dominated by low gastrointestinal bleeding and symptoms related to intestinal obstruction.

In this study, left colon cancer was dominant, which was similar to that found by Karel *et al.*^[34] and Zanella *et al.*^[35] More than half of the screened patients showed tumors from cecum to transverse colon.

Adenocarcinoma was the most common histological change in the study group^[36,37]. In the opinion of these authors, adenocarcinoma was the most common histological type of colon cancer, accounting for about 95% of colon cancer. According to the degree of differentiation, highly differentiated people dominated the study and were related to chronic inflammation. The data were consistent with those found by Wang *et al.*^[38]

5. Conclusion

In this study, 70 to 79 years old women with a history of fair skin adenoma dominated. Lower gastrointestinal bleeding was the most common clinical manifestation, which was related to left position. Some patients need

surgical treatment, and the most commonly used technique was left hemicolectomy. Most tumors were well differentiated, accompanied by chronic inflammation, passing through the proper muscle without lymph node involvement (Astler and Collier B2). Adenocarcinoma was the most common histological variant. Complications were rare, and the most common were surgical wound bleeding and infection.

Conflict of interest

The authors declare that they have no conflict of interest.

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