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# Colorectal Cancers: Frequency and Surgical Management at the Ignace Deen General Surgery Department and at the Donka Oncological Surgery Unit (CHU CONAKRY)

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**Abstract:** *Introduction:* the purpose of this study was to determine the hospital frequency of colorectal cancers, to write the modalities of surgical management of CRC to the department of general surgery of the Ignace Deen National Hospital and to the oncological surgery unit of Donka. *Material and Methods:* this was a retrospective descriptive study lasting five years from 1 January 2014 to 31 December 2018. This study focused on patients admitted and operated on in one of the two (Ignace Deen General Surgery and the Donka Oncological Surgery Unit) and including a report of the pathological examination of the operating room confirming the diagnosis. *Result:* at the end of this study we collected 89 cases of CC (64 colonic cases and 25 rectal cases) or a hospital frequency of 3.47%. The most affected age group was 40-49 years 24.7% (n=22). The average age of the patients was 51 years with extremes of 13 years and 76 years. We observed a male predominance, a sex ratio of 1.1. Housewives were the most affected 35.96% of cases (n=32). 82.02 % (n=73) of our patients resided in Conakry. The most common localization was colon with 72% of cases (n=64). The most common histological type was adenocarcinoma with 84.27% of cases (n=75). We observed an advanced TNM stage with stage III (n=8) with 9% and stage IV (n=24) with 27% respectively. Surgery was performed in 76.40% of cases (n=68) and chemotherapy in 39.33% of cases (n=35). We recorded a mortality rate of 36.7% of cases (n=25), patients lost to follow-up accounted for 5.62% (n=5). 51.5% of cases (n=35) had a favorable outcome. 11.8% of our patients had complications (n=8) with a type of suppuration 7.4% (n=5) and incisional hernia 4.4% (n=3). *Conclusion*: The difficulties of management in our practice were related to the delay of diagnosis and the cost of chemotherapy drugs.

**Keywords:** Colorectal Cancers, Frequency, Surgical Management, Ignace Deen National Hospital, Oncological Surgery Unit of Donka

## 1. Introduction

Due to its frequency in the world, colorectal cancer remains today a real public health problem; it is the 3rd most frequent cancer location and the 2nd most common cause of cancer mortality after lung cancer [1].

Its incidence varies from one country to another due to differences in the lifestyle of the populations, the type of diet and the hereditary predisposition. However, a common observation is that we are beginning to notice a rejuvenation

of the population affected by this type of cancer [2].

Despite advances in diagnostic investigations in recent decades, the frequency of colorectal cancer remains underestimated and mortality is high [3].

The standardized incidence rates of CRC on the structure of the world population are estimated at 36.3/100,000 people year in men and 24.7/100,000 in women, which places colorectal cancers in third place of incidence after prostate cancers and lung cancers in men and in second place of incidence in women after breast cancers [4].

Colorectal cancer constitutes a significant part of the global burden of cancer morbidity and mortality: approximately 1 million new cases are diagnosed each year and more than half a million people die from this disease worldwide, i.e. approximately 8% of all colorectal cancer-related deaths [5].

Their therapeutic management, within the framework of the recommendations of the cancer plan, must be global and multidisciplinary and in particular medical and surgical.

The surgical procedure remains the strongest link in the management of these cancers. Pre- or post-operative irradiation of rectal cancers reduces local recurrence but its effect on survival remains debated. Despite therapeutic progress, the 5-year relative survival rate remains low because of the lack of early detection, most diagnoses being made at an advanced stage. [6, 7]. In our practice the diagnosis of colorectal cancer is often made at the stage of complications. There is a delay in consultation often mistaken for hemorrhoids.

The aim of this study was to determine the hospital frequency of colorectal cancer, to write the sociodemographic profile and to write the modalities of surgical management of colorectal cancers in the general surgery department of the Ignace Deen national hospital and in the oncological surgery unit of Donka (UCO).

## 2. Material and Methods

This was a retrospective study of descriptive type with duration of five years from January 1, 2014 to December 31, 2018.

This study concerned patients admitted and operated in one of the two services (Ignace Deen general surgery and Donka oncological surgery unit) and including a report of the anatomopathological examination of the operating room confirming the diagnosis.

*Ethical considerations:* Ethics and medical deontology were respected during our study. Our collection form was anonymous and the data collected through it were guaranteed confidentiality.

## 3. Results

We conducted a study of 2563 admitted patients. We collected 89 cases of colorectal cancer, 60 of which were at UCO Donka and 29 at Ignace Deen general surgery (64 colonic cases and 25 rectal cases), i.e. a hospital frequency of 3.47%.

***Table 1.*** *Distribution of colorectal cancers by socio-demographic characteristics of patients.*

| Age (n=89) | Workforce | Percentage |
|---|---|---|
| Mean age (years) | 51 ± 14 | |
| 10-19 | 2 | 2,2 |
| 20-29 | 4 | 4,5 |
| 30-39 | 12 | 13,5 |
| 40-49 | 22 | 24,7 |
| 50-59 | 21 | 23,6 |
| 60-69 | 15 | 16,9 |
| 70-79 | 13 | 14,6 |
| Sexes (n=89) | | |
| Sex ratio (M/F) | 1,1 | |
| Male | 46 | 51,72 |
| Female | 43 | 48,28 |
| Profession (n=89) | | |
| Merchant | 24 | 26,96 |
| Cultivator | 2 | 2,25 |
| Housekeeper | 32 | 35,96 |
| Public servant | 29 | 32,58 |
| Student | 2 | 2,25 |
| Provenance (n=89) | | |
| Conakry | 73 | 82,02 |
| Outside Conakry | 16 | 17,98 |
| Vices (n=89) | | |
| Tabac | 14 | 16 |
| Alcoholotabagic | 6 | 7 |
| None | 69 | 77 |
| Total | 89 | 100 |

***Table 2.*** *Frequency of clinical signs.*

| Signs | Workforce | Percentage |
|---|---|---|
| Abdominal pain | 54 | 60,67 |
| Anorexia | 47 | 52,80 |
| Physical asthenia | 46 | 51,68 |
| Constipation | 44 | 49,43 |
| Weight loss | 26 | 29,21 |
| Alternating diarrhea/constipation | 25 | 28,08 |
| Rectorrhagia | 16 | 17,97 |
| Abdominal bloating | 16 | 17,97 |
| Proctalgia | 15 | 16,85 |
| Vomiting | 6 | 6,74 |
| Anal swelling | 3 | 3,37 |
| Tenesmus | 1 | 1,12 |

N=89

***Table 3.*** *Distribution of colorectal cancers by TNM stage.*

| Stade TNM | Workforce | Percentage |
|---|---|---|
| Stage III | 8 | 9 |
| Stage IV | 24 | 27 |
| Unclassifiable | 57 | 64 |
| Total | 89 | 100,00 |

***Table 4.*** *Distribution of colorectal cancers by chemotherapy.*

| Chemotherapy | Workforce | Percentage |
|---|---|---|
| No | 54 | 60,67 |
| Yes | 35 | 39, 33 |
| Total | 89 | 100,00 |

***Table 5.*** *Distribution of colorectal cancers by indication for chemotherapy.*

| Indications | Workforce | Percentage |
|---|---|---|
| Adjuvant | 15 | 43 |
| Palliative | 20 | 57 |
| Curative | No | 0 |
| Total | 35 | 100 |

***Table 6.*** *Distribution of colorectal cancers by surgical procedure.*

| Surgical procedure | Workforce | Percentage |
|---|---|---|
| Temporary colostomy | 22 | 32,4 |
| Permanent colostomy | 3 | 4,4 |
| Left Hemicolectomy + recovery | 34 | 50 |
| Right Hemicolectomy+ recovery | 9 | 13,2 |
| Total | 68 | 100 |

***Table 7.*** *Distribution of colorectal cancers according to operative follow-up.*

| Suites | Workforce | Percentage |
|---|---|---|
| Simple | 35 | 51,5 |
| Suppuration | 5 | 7,4 |
| Evisceration | 3 | 4,4 |
| Deceased | 25 | 36,7 |
| Total | 68 | 100 |

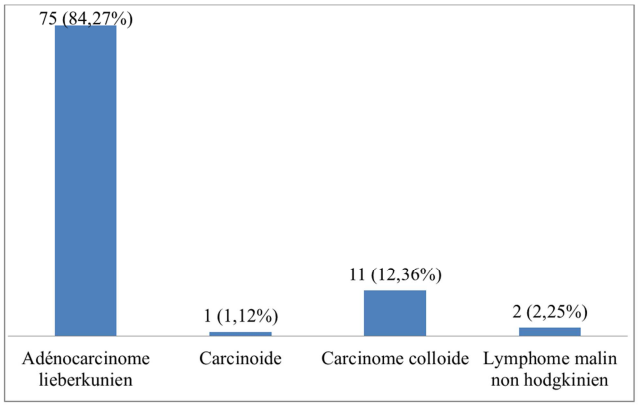


***Figure 1.*** *Distribution of colorectal cancers by histological type.*

# 4. Discussion

In order to improve the management and determine the hospital frequency of colorectal cancers, we conducted a retrospective descriptive study over a period of 5 years from January 1, 2014 to December 31, 2018 on 2563 records of patients admitted and operated during the study period.

We collected 89 cases of colorectal cancer (64 colonic cases and 25 rectal cases), a hospital frequency of 3.47%. This frequency is not negligible because it is difficult to evaluate for the moment due to the absence of a cancer registry established from collections based on reliable coding criteria on the one hand and the non-accessibility of hospital care for the entire population on the other hand.

The absence of systematic mass screening by HEMOCULT makes the prevalence of this cancer imprecise.

Similar results were reported by Diallo AT et al. in Guinea [8] in 2016 that collected 53 cases of colorectal cancer, a hospital frequency of 3.21%.

Generally speaking, colorectal cancers are not very frequent in Guinea. In fact, they ranked first (52.1%) among digestive tract cancers in the Surgical Oncology Unit [9]; however, international data show a high frequency of stomach cancer ahead of colorectal cancer [10].

In our series, the mean age of 51 years is younger than that reported by FOCAN et al in Belgium which was 63.7 years [11].

The most affected age group was 40-49 years 24.7% (n=22).

Thus, colorectal cancer appears at a relatively younger age in Africans than in Westerners [1]. Usually, it is a disease of the elderly, with an incidence that increases significantly after the age of 50 [9, 13, 14, 15]. In Europe, about 70% of cases affect patients aged 65 years and over [16]. This difference could be explained by the reflection of the essentially juvenile population in our regions.

We noted a male predominance with a sex ratio of 1.1 in our study, as reported by other authors (1.1; 1.2) [11, 12, 17]. This male predominance could be explained by a genetic (familial) predisposition.

In our study, housewives were the most affected 35.96% is supposable to that reported by Diallo AT et al (35%) [8].

In our study the majority of our patients came from the special zone of Conakry 82.02% (n=73). The high frequency of CRC in the city of Conakry would be related to the proximity and geographical accessibility of cancer diagnosis and treatment services.

The colon was the most frequent location with a total of 64 patients, i.e. a frequency of 72% in our study, as reported by other authors (71.59%) [8, 11].

In our series, diagnostic confirmation was established on histological examination of the surgical specimen, with a clear predominance of adenocarcinoma, as reported in the literature (74-90%) [8, 13, 18, 19].

In clinical practice, tumor markers such as CEA and CA 19.9 are often used for the detection of adenocarcinoma. In general, CEA is elevated in cancer recurrence, it is widely considered as a marker for post - operative surveillance in CRC [20, 21]. Although the specificity of CA 19.9 for detecting colorectal cancer is 96%, its sensitivity is only 23% [20]. In our study, CEA was elevated in 4 out of 6 patients who performed the assay while CA19.9 was elevated in only one out of 13 patients.

Advanced stages (III and IV) represented 36% of cases (n=89). In Mali, stage IV represented 85% of cases [21]. Our results contrast with those of an Algerian study which reported a frequency of 43.5% and 3.2% respectively for stages III and IV [15]. This difference could be explained by the fact that CRC remains unrecognized in sub-Saharan Africa and particularly in Guinea, due to the precariousness of the means of diagnosis, which are most often made at an advanced stage. [..Surgery was performed in 76.40% of the cases (n=68). Left or right hemi-colectomy was performed in the majority of cases (63.2%). In our context, it is a late discovery, sometimes at a stage where no curative action is possible.

Chemotherapy was performed in 39.33% (n=35), this could be explained by the fact that most of the patients had a low economic level. The surgical follow-up was simple in 51.5% (n=42) 5.6% of our patients were lost to follow-up

(n=5), the patients were lost to follow-up either because they were unaware of their cancer or because the financial resources for their treatment were not available. In this case, they end up in other less adequate structures, with tradithérapeutes or die at home.

We recorded a total of 25 deaths, i.e. 36.7%. This mortality could be explained by the fact that in Guinea, colorectal cancers are discovered late, making any curative action almost impossible.

# 5. Conclusion

In our study, it was found that CRC is not very frequent in Guinea with an average age of 50 years and a male predominance. The colon was the most frequent location with a clear predominance of adenocarcinoma. The surgical procedure was dominated by left hemicolectomy plus restoration of continuity. The difficulties of management in our practice were related to the delay of diagnosis and the cost of chemotherapy drugs.

# Conflict of Interest

The authors declare that they have no competing interests.

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