

Descriptive analytical study of 41 colorectal cancer cases operated in Senegal

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ABSTRACT

In Senegal colorectal cancer cases account for 2.5% of all cancers. This prevalence is underestimated as due to the inaccessibility to care. The aim of our study was to describe anatomopathological and epidemiological characteristics in patients with colorectal cancer in Senegal. This is a prospective, descriptive and analytical study from 2012 to 2015 on patients having undergone surgery for colorectal cancer. 41 cases were selected on a more important number of filed cases. Data based on factors such as age, sex, tumor location, and diagnosis of stage (TNM) were studied using the Excel software. The average age of our patients was around 50 and the majority was above 60. The sex ratio was 0.76 for women. Our study population was dominated by the Wolof ethnic group, which accounted for over half of the targeted population (51%). Other ethnic groups were poorly represented. Adenocarcinoma histology was dominant, with preferential localization at the left colon. The stage of diagnosis according to the TNM classification was pT3. Our study shows that the majority of patients come to consultation at a somewhat advanced stage. Alongside this analytical study, a genetic study of DNA will be performed at the Laboratory of Biochemistry and Molecular Biology at the University Cheikh Anta Diop of Dakar.

Keywords: Colorectal Cancer, descriptive study, Senegal

INTRODUCTION

Colorectal cancers are the third type of the most common cancer with more than 500,000 deaths per year (Ferlay et al., 2002). The incidence is substantially higher in developed countries than in less developed countries. (Weitz et al., 2002) Africa is not an exception; in Senegal they account for 2.5% of all cancer cases and 20% of cancers affecting the digestive tube (BENGUE, 1995). Actually these rates do not reflect the reality because many patients do not have access to quality care. The frequency of colorectal cancers is certainly due to changes in the living and eating habits. In addition to these so-called environmental factors, genetic factors are also involved. And the study of these genetic factors is

important to describe the anatomopathological, epidemiological and analytical characters.

Patients and Methods

This is a prospective, descriptive and analytical study carried out from 2012 to 2015 among patients operated for colorectal cancer. The anatomopathological study was performed in the laboratory of Grand Yoff Public Hospital (Dakar). 41 patients files were selected within a bigger sample size. Data relating to factors such as age, sex, tumor location, and diagnosis of stage (TNM) were analyzed using Excel software.

Table I.Classification of patients per age group

Age	Number of cases	Percentage
0-20 years	0	0
21-40 years	5	12
41-60 years	12	29.5
61-80 years	24	58.5

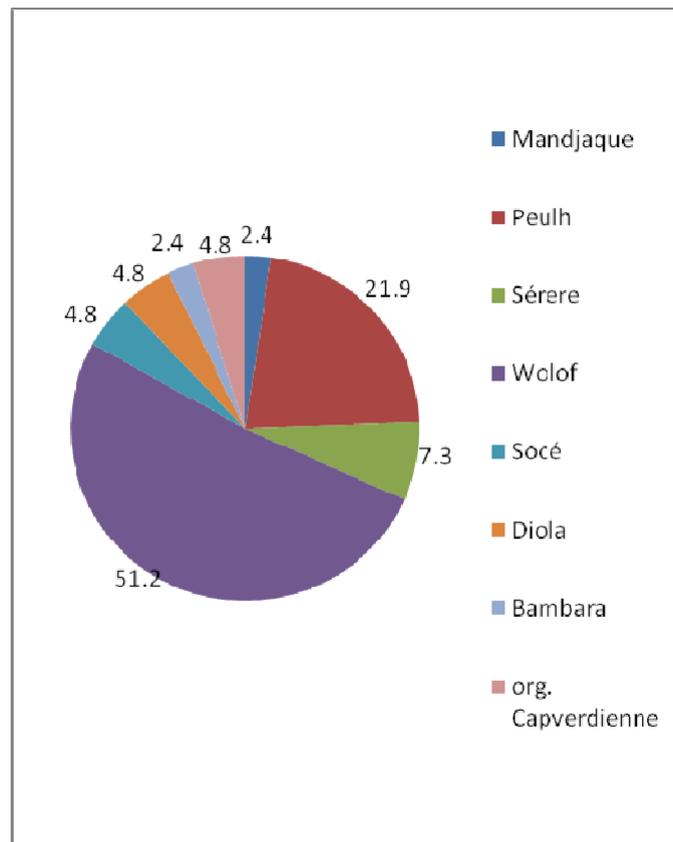


Figure 1.Classification per ethnic group

RESULTS

General characteristic of the study population: the average age of patients included in the study was 50, ranging from 21 to 80. The study population consisted of 22 women (51%) and 19 men (49%) with a sex ratio of 0.95. The majority of patients was over 60 years old and there were no patient under 21 years (Table 1).

Classification per ethnic group: our study population was dominated by the Wolof ethnic group, more than half (51%) followed by the Fulani (21%). Others ethnic groups were poorly represented. (Figure1).

Classification per tumor location: There was a predominance in the left colon, particularly at the front

sigmoid (23% of cases) and at the level of the rectum, 19% of cases (Figure 2).

Classification perTNM: Only 5% of patients were at the pT1 stage during diagnosis, 17% at pT2 stage, 68% at pT3 stage and 10% at pT4stage (Figure 3)

DISCUSSION

Colorectal cancer is ranked second in terms of incidence in developed countries where it is the fourth leading cause of death. Each year, 1.227 million new cases are diagnosed worldwide and the death toll is estimated at 528,000. (Ferlay et al., 2002). In the US, it is the third cause of death in both sex groups. In Mali it accounted

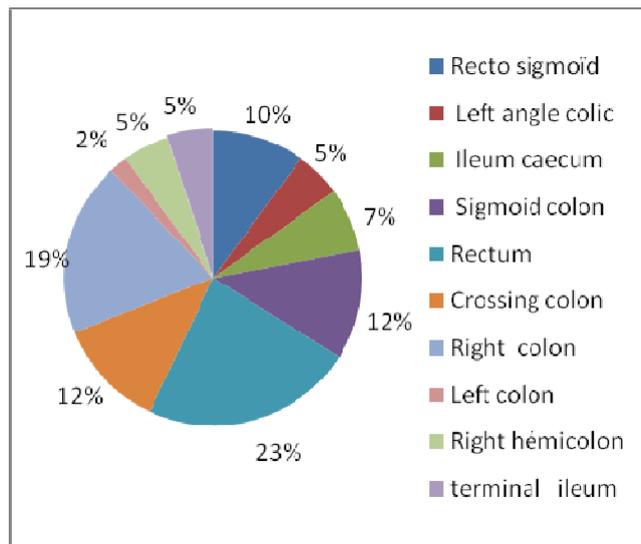


Figure 2. Classification per tumor localization

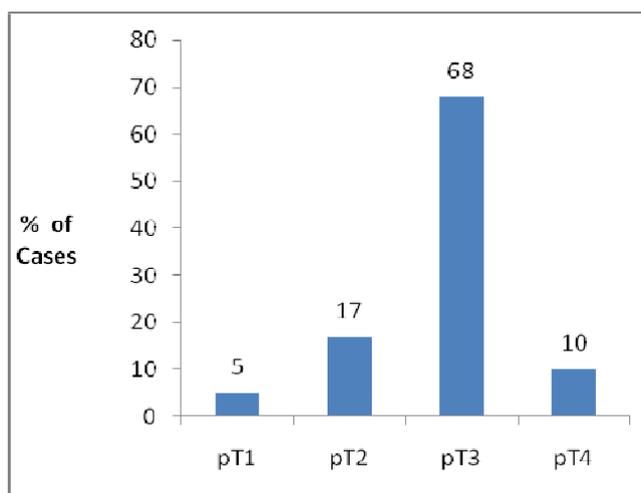


Figure 3. Classification according to the TNM method (in % of the total cases)

for 3.8% of all cancers cases as per the 1995 cancer registry data (Traore , 2007).Colorectal cancer is underestimated in Senegal, as in most African countries (Gabon, Mali ...) (Diallo et al., 2011). This can be explained by an under reporting of cases or difficulty of access to care for the population.

In Africa the average age at which the disease develops around 48 years old. In Côte d'Ivoire, the average age found in the study of Yangni ANGATE et al. was 46, whereas it was 46.7 years, ranging from 22 to 76 years, in the study of Traoré in Mali.

The average age of patients in our study is slightly near the standards of (50) ranging from 21 to 80 years. Generally the disease develops at a younger age in our

countries, compared to developed countries where the cancer appears around 65 ± 10 years (Diallo et al., 2011).

No cases between 0 and 21 years was found (Table 1), as in the Traoré study where the youngest patient was 22 years old (Traore , 2007).

The major ethnic groups are concerned: Wolof account for 51.2% of patients, followed by Fulani (21.9%). The others groups are poorly represented. These figures are explained by the fact that the majority of the Senegalese population and particularly the population of Dakar is dominated by Wolof ethnic group.

In many African settings males were emphasized as demonstrated by the studies of Traoré and PADONOU et

al., whose sex ratio are respectively 1.47 and 1.5. Our result is closer to that of Diallo Owono which shows a sex ratio is in favor of women (0.76).

Almost all parts of the intestine are concerned with a predominance in the rectum (Figure 1). Sawadogo and Takongmo found a double dominant sigmoid location in their series. Similarly Meddah et al obtained a high frequency of malignancy of the left colon (61.8%) compared to the right colon (38.2%).

According to the TNM classification, only 5% of patients were pT1, 17% pT2, and pT3 68% and 10% pT4. These results may be explained by the delay in consultation and a very long diagnosis. In the African context this phenomenon is mostly due to the fact that people firstly turn to traditional medicine and also to the difficult access to care (Diallo et al., 2011)

CONCLUSION

Colorectal cancer is a serious pathology because it is the fourth cause of death. In Senegal the incidence goes increasing every year. This is a pathology that affects more and more young patients with a female predominance. It mainly affects the rectum with the presence of adenocarcinoma. After this analytical study, it will be necessary to perform a genetic study of DNA at the Laboratory of Biochemistry and Molecular Biology of the University Cheikh Anta Diop of Dakar.

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