



Gastrointestinal Cancer in Young Adults: Report of 77 Cases at Aristide Le Dantec Teaching Hospital of Dakar, Senegal

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Abstract

Introduction: There is little data on digestive cancers among young people in Sub-Saharan countries. We conducted a retrospective study at Aristide Le Dantec Teaching Hospital in Dakar, Senegal, to describe the epidemiological, topographic and histological aspects of gastrointestinal cancer in the young people.

Material and Methods: It's a retrospective study conducted over 3 years in 3 departments. It covered all patients aged 15 to 35 years admitted for gastrointestinal cancer.

Results: We collected 77 files. There were 45 men (58.4%) and 32 women (41.5%). The average age was 28. The most frequent cancers were the esophageal cancer (37.6%), the colorectal cancer (33.7%) and the liver cancer (20.8%). Nowadays, the new lifestyle of the young adults exposes them to more risk factors for digestive cancers.

Conclusion: The real incidence of digestive cancer in Sub-Saharan Africa is still unknown, but more young people are likely being affected.

Keywords: Digestive cancer; Young people; Epidemiology

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Introduction

In developing countries, particularly in Africa, there is little data on digestive cancers among young people. In the last decade, studies have shown a predominance of gastric and liver cancer with an increasing number of young adults [1]. In Senegal, the incidence of gastrointestinal cancer and its outcomes are unknown especially among the young adults.

We conducted a retrospective study to describe the epidemiological, topographic and pathological aspects of gastrointestinal cancer in the age group 15 to 35 years.

Material and Methods

It's a retrospective study conducted at Aristide Le Dantec Teaching Hospital in Dakar, Senegal, over 3 years from January 1st, 2010 to December 31st, 2012. It covered all patients aged 15 to 35 years admitted in general surgery, oncology or gastroenterology department for confirmed gastrointestinal cancer. The diagnosis of the digestive tract cancer was done with the histological study. The diagnosis of liver cancer was based on clinical and radiological aspects of the liver and alpha-fetoprotein marker over 400 UI/l. For pancreas, it was based on cholestatic jaundice added to a pancreatic mass. Data were collected from patient files. The studied parameters were related to the epidemiologic aspects, the lifestyle of the patient, the personal and family history, the clinical and histological aspect of the cancer.

Results

Epidemiologic aspects

We collected 77 files with an average of 25 cases per year. There were 45 men (58.4%) and 32 women (41.5%). The average age was 28 and most patients were in the age group 30 to 35 years (Figure 1). Thirteen patients (16.8%) regularly drunk very hot beverage (tea, coffee), 8 patients were

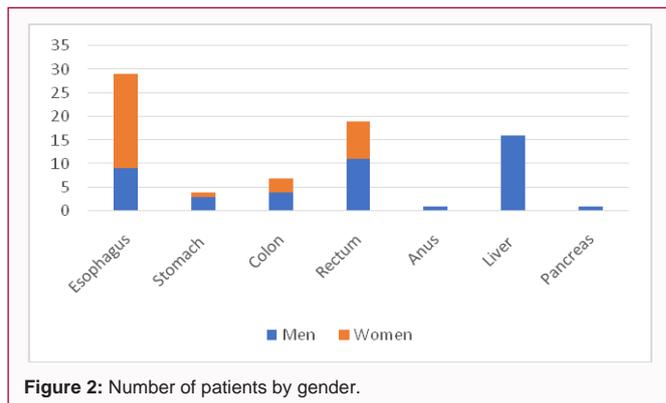
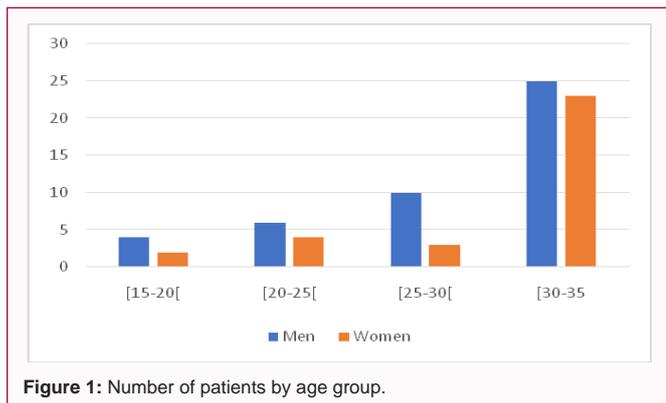


Figure 1: Number of patients by age group.

Figure 2: Number of patients by gender.

Table 1: Histological types by cancer location.

Organ	Histology	Number	Total	%
Esophagus	Epidermoid carcinoma	28	29	37.7
	Adenocarcinoma	1		
Stomach	Adenocarcinoma	4	4	5.2
Colon Rectum	Lieberkuhnian adenocarcinoma	25	26	33.7
	Colloid adenocarcinoma	1		
Anus	Adenocarcinoma	1	1	1.3
Liver	Hepatocellular carcinoma	16	16	20.8
Pancreas	Adenocarcinoma	1	1	1.3

smoking (10.4%) and 2 were alcoholic (2.6%). Seven patients had hepatitis B (8%) in their medical history. No patient had a history of polyposis or was aware of previous history of familial gastrointestinal cancer. Five patients had a history of epigastric pain (6.4%), 2 had a confirmed gastrointestinal ulcer (2.5%) and one had a gastrointestinal reflux (1.2%).

Topographic and pathologic aspects

There were esophageal cancer in 29 cases (37.6%), colorectal cancer in 26 cases (33.7%), liver cancer in 16 cases (20.8%), gastric cancer in 4 cases (5.1%), pancreatic cancer in 1 case (1.2%) and anal cancer in 1 case (1.2%). There was no case of a duodenal cancer or a jejunal cancer. The histologic aspects are found in Table 1.

Esophageal cancer mostly involved female with 20 cases (Figure 2). It was located at the upper 1/3 of the esophagus in most of the cases. The histological aspect was an epidermoid carcinoma in 28 cases (96.5%) (Table 1). The gastric cancer was in the cardia in 1 case and in the antrum and pylorus in 3 cases. It was an adenocarcinoma in all cases. The liver cancer only involved men (Figure 2). The clinical examination and the imagery showed a multinodular liver for all patients who had liver cancer. Two patients had hepatic biopsy and the histology confirmed a hepatic carcinoma. One patient had pancreatic cancer. The tumor was located at the tail of the pancreas. The histologic examination of the peroperative biopsy showed an adenocarcinoma. The colorectal cancer was in the colon in 7 cases and in the rectum in 19 cases. It was a Lieberkuhnian adenocarcinoma in 25 cases and a colloid adenocarcinoma in one case. One patient had an anal adenocarcinoma (Table 1).

Ten patients had metastases (12.9%) in liver or in lungs. There was no bone metastasis. These metastases concerned the esophageal, gastric and colorectal cancer.

Discussion

In sub-Saharan Africa studies have been conducted on the general population, but little is known about epidemiologic aspects of gastrointestinal cancer in young adults. The existing evidence suggests that gastrointestinal cancers are increasingly frequent in Africa [1]. In Senegal also very little is known about the incidence of gastrointestinal cancers, especially in young adults, because the country does not have a national registry of cancer. The 2012 Globocan report estimated around 6.800 new cancer cases per year in Senegal [2]. Although most of these cancers are urogenital cancers, the digestive cancers constitute an important part and most likely affect more and more young adults. In our study we report on 77 cases over 3 years (from January 2010 to December 2012). However, to be able to better measure and understand the incidence of gastrointestinal cancers in Senegal, a more robust information system is needed inside health facilities where these cancers are treated. Also, at the national level, data on cancer cases should be centralized for easy access by researchers.

In countries like Senegal, gastrointestinal cancers are often lately discovered when the patient eventually consult a health provider or in many cases the disease is never known [3,4]. This is due to many causes including self-medication by patients, their first resort to traditional healers, and the lack of health policies for gastrointestinal cancer screening. The progressive availability of imaging equipment in more hospitals and the fact that young adults are more and more educated about seeking care early will likely lead to discovery of more new cases and a more complete assessment of the incidence of these types of cancer in Senegal [4].

Nowadays, with the fast modernization of our cities, the lifestyle of many young adults has changed. They eat little vegetables and their diet is often made of red and/or fatty meat over cooked. Also, they regularly drink hot tea after each meal, and salty and smoked foods are part of people dietary habits [3]. The lack of exercising, smoking, alcoholism and the daily stress of young adults are added to all this. All these factors are favorable to an increase in gastrointestinal cancer in the young adult population.

The most frequent cancer in our study was the esophageal cancer, the colorectal cancer and the liver cancer with respectively 29, 26 and 16 cases. These 3 cancers represented more than 90% of the cases. This predominance could be explained by several factors. Apart from genetic risk factors, drinking alcohol or very hot beverage and smoking tobacco are considered as primary risk factors for esophageal cancers in many studies [5,6]. In our study 69% of esophageal cancer patients were female. This finding allows us to suggest chronic

anemia as a possible etiology of esophageal carcinoma. Chronic anemia has already been mentioned as a probable etiological factor of carcinomas of the hypopharynx in Senegal [7]. The high prevalence of iron deficiency in women in our countries might be a risk factor of esophageal carcinoma and could explain the predominance of female in our study. However, this point need to be further investigated. Also, the Human Papillomavirus (HPV) has been implicated in the etiology of esophageal carcinoma [8]. However, it involvement is much more subject to controversy than for cervical carcinogenesis.

The infection of HBsAg and *Helicobacter pylori* had clearly been identified respectively as liver and gastric cancer risk factor, and the infection of *Helicobacter pylori* and HBsAg prevalence still are public health problem in Senegal as in many Sub-Saharan countries [9,10]. Senegal's prevalence of *Helicobacter pylori* is estimated at close to 80%, and the country is classified as a highly endemic area of hepatitis B [11,12]. Colorectal cancers can be attributable to obesity, reduction of physical activities and diet rich in animal fat [4].

Anal and pancreatic cancers are rare in young adults [13,14]. We reported one case for each type. Anal cancer occurs most often in people with venereal diseases especially infection of HPV.

In general, the histopathological characteristics of the gastrointestinal cancer in our study were globally like those reported in the literature [15-17]. It was a carcinoma or an adenocarcinoma.

Conclusion

The incidence of digestive cancer in Sub-Saharan Africa is unknown. We have reported 77 cases over 3 years at Aristide Le Dantec Teaching Hospital of Dakar, Senegal. Many environmental factors could be involved, but the new lifestyle of the young adults appears to be an important factor.

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