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Clinical and Epidemiological Aspects of Hepatocellular Carcinoma at the Internal Medicine Department of Point "G" Teaching Hospital in Mali

Ganda Soumaré[1*], Sanra Déborah Sanogo[1], Abdoulaye Maiga[1], Ouatou Mallé[1], Mamadou Mallé[1], Ibrahima A. Dembélé[2], Mamadou Cissoko[2], Mamadou M. Coulibaly[2], Assétou Kaya Soukho[2], Mamadou Dembélé[2], Abdel Kader Traoré[2], Alassane Traore[2], Hamar Alassane Traore[2]

[1]Gastroenterology Department, CHU du Point G, Bamako, Mali
[2]Internal Medicine Department, CHU du Point G, Bamako, Mali
Email: *gandasoumare@yahoo.fr

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Abstract

Liver cancer is the malignant transformation of liver cells. It develops in 90% of cases of cirrhosis, more rarely on chronic non-cirrhotic liver disease, and exceptionally in a healthy liver. This study aimed to investigate the clinical aspects of Hepatocellular Carcinoma (HCC). It was a retrospective descriptive study covering 10 years, focusing on HCC cases seen in outpatient and inpatient settings at the Internal Medicine Department. We recorded 153 cases out of 7021 patient records, resulting in a hospital frequency of 2.17%. The male-to-female ratio was 3.5. The mean age was 52.37 ± 14.34 years. The most common presenting complaint was pain in 16.3% of cases. A history of jaundice was found in 25.5% of cases. Alcohol consumption was observed in 15.38% of cases. The main physical sign found was hepatomegaly in 76% of cases. HBsAg was positive in 33.3% of cases. Alpha-fetoprotein levels were above 400 IU/ml in 50.81% of cases. Patients classified as CHILD PUGH A represented 39.72% of cases. Abdominal ultrasound revealed portal thrombosis associated with heterogeneous multinodular hepatomegaly in 11% of cases. Cytology confirmed HCC in four out of six patients who underwent the examination. We recorded 63 deaths out of 111 hospitalized patients. Complications included encephalopathy, hematemesis, and ascites in 48 patients. Hepatocellular carcinoma remains a significant public health issue. Its predominance in men and its occurrence in adults with factors such as viral infections and ethylism mean that prevention of this pathology could greatly reduce its incidence.

Keywords

Hepatocellular Carcinoma (HCC), Point G University Hospital, Bamako, Mali

1. Introduction

Liver cancer is the malignant transformation of liver cells [1]. It develops in 90% of cases on a background of cirrhosis, less commonly on non-cirrhotic chronic liver disease, and exceptionally on a healthy liver [2]. Hepatocellular carcinoma (HCC) is the most common primary liver cancer. It accounts for 500,000 to 1 million deaths annually worldwide, ranking it as the 6th most common cancer in incidence and the 3rd most deadly cancer [3]. Due to its high prevalence and fatal outcome, liver cancer remains a public health problem despite therapeutic advancements. In Mali, 2.61% of suspected cancers were detected through ultrasound examinations in the Radiology and Nuclear Medicine Department [4]. Numerous studies have been conducted on the clinical aspects of HCC. To contribute to further research, we aimed to study the clinical and epidemiological aspects of HCC.

2. Methods

This was a descriptive study with retrospective recruitment of data from January 1, 2006, to December 31, 2015, focusing on cases of hepatocellular carcinoma seen in outpatient and inpatient settings at the Internal Medicine Department of the university hospital center (CHU) du Point G during the study period, without distinction of sex or age. The variables studied were: age, sex, characteristics of the hepatomegaly, alcohol or tobacco consumption, medical history of jaundice, alpha-fetoprotein, HBV and HCV serologies, ultrasound characteristics of the hepatomegaly, and histological results of the liver biopsy. Included patients were those clinically, biologically, morphologically, or histologically suspected of having hepatocellular carcinoma. Clinical signs included right hypochondrium pain and palpable painful hepatomegaly. A threshold of alpha-fetoprotein level above 400 IU/ml was considered as a biological criterion. Morphological criteria were assessed using abdominal ultrasound and abdominal CT scan. Abdominal ultrasound criteria included dysmorphic, heterogeneous, multinodular liver or nodules larger than 2 cm on cirrhosis. A liver nodule showing arterial enhancement and late washout on portal phase was considered on abdominal CT scan, and cytology of fine-needle liver biopsy showing Papanicolaou class 3 or 4 was also considered. Abdominal ultrasound and/or abdominal CT scan were performed by a radiologist from the CHU or a specialized clinic. Alpha-fetoprotein tests were conducted in a specialized laboratory. Cytology was performed at the cytology and pathological anatomy department of CHU Point G. All patients received medical treatment including analgesics, lactulose, and antibiotics ac-

cording to their symptoms. Patient follow-up was conducted quarterly during a consultation in the department, which involved a comprehensive clinical examination. Patient anonymity was maintained, and result availability after the investigation was ensured. Data were collected on a survey form, then entered and analyzed using SPSS 2.0 software. The texts and tables were produced using Microsoft Word 2013 software.

3. Results

The study included 153 cases of HCC out of 7021 patient records (111 hospitalizations and 42 outpatient consultations), resulting in a hospital prevalence of 2.17%. The age group of 50 - 59 years represented 27.5% of cases (Table 1). The mean age was 52.37 ± 14.34 years, ranging from 16 to 89 years. Males accounted for 77.8% of cases, with a male-to-female ratio of 3.5 (Table 1). Right hypochondrium pain was the most reason of consultation or hospitalization in 16.3% (Table 2). The main physical sign found was a palpable, painful, irregular, hard hepatomegaly with a blunt lower border, observed in 76.06% of cases. All patients with pain received analgesics ranging from levels 2 to 3. Alcohol consumption (both modern and traditional) was reported in 2.6% of cases, and tobacco use (cigarettes, chewing tobacco, or pipe ash) was reported in 11.7%. A history of jaundice was present in 25.5% of cases. The proportion of patients with AFP levels above 400 ng/ml was 50% (Table 3). HBs antigen was positive in 33.3% of cases, and HCV serology was positive in 4.6% (Table 4). The morphological aspect of tumors was heterogeneous multinodular on abdominal ultrasound in 72 patients, accounting for 47.1% of cases. Cytology could be performed on 6 patients, among whom 4 cases confirmed the diagnosis of liver

Table 1. Sociodemographic data.

Sociodemographic data	Number	%
	Sex	
Male	119	77.8
Female	34	22.2
	Age in years	
under 20	1	0.7
20 - 29	8	5.2
30 - 39	21	13.7
40 - 49	28	18.3
50 - 59	**42**	**27.5**
60 - 69	38	24.8
70 - 79	11	7.2
80 - 89	4	2.6
Total	**153**	**100**

Table 2. Patient distribution by reason for consultation and hospitalization.

Reason for consultation and hospitalization	Number	%
Right hypochondrium pain	**25**	**16.3**
Ascites	24	15.7
Abdominal pain	20	13.07
Hépatomegaly	20	13.07
Jaundice	16	10.5
Hepatocellular carcinoma	11	7.2
Abdominal distension	9	5.9
Disturbed consciousness	9	5.9
Impaired general condition	8	5.2
Lower limb edema	8	5.2
Hepatic encephalopathy	7	4.6
Weight loss	5	3.2
Hematemesis	5	3.2

Table 3. Distribution according to alpha-fetoprotein levels.

Alpha-fetoprotein	Number	%
<200 UI/ml	31	25.40
200 to 400 UI/ml	29	23.77
>400 UI/ml	62	50.81

Table 4. Distribution according to HBV and HCV serologies.

Serologies	Positive		Negative	
	Number	%	Number	%
HbsAg	51	33.3	38	24.8
HCV	7	4.6	32	20.9

cancer. We recorded 83 deaths among the 111 hospitalized patients, *i.e.* 74.77% at the time of the study. We have lost sight of 25% of our patients once the diagnosis has been confirmed.

4. Discussion

This descriptive study aimed to investigate the clinical aspects of hepatocellular carcinoma (HCC) and determine its frequency in the internal medicine department.

The study was conducted from January 1, 2006, to December 31, 2015. The reliance on traditional medicine and low socioeconomic status have contributed to delays in diagnosis and treatment for the majority of our patients.

The hospital prevalence of HCC was found to be 2.17%. This result is comparable to a study by Kanté, which reported a prevalence of 2.61% [4], higher than the prevalence reported by Camara (0.57%) [5], and lower than that reported by Wandji (6.5%) [6].

The age group of 50 - 59 years represented 27.5% of the cases, with a mean age of 52.37 ± 14.34 years ranging from 16 to 89 years. This result is close to the findings of Ibara *et al*., who reported a mean age of 47 years [7]. It is lower than the average age reported in Western countries, where the mean age is ≥60 years [4]. According to Duval, HCC is rare before the age of 50 [8], possibly due to mandatory hepatitis B vaccination, with individuals over 50 years of age not being vaccinated.

In our series, males accounted for 77.8% of cases, with a male-to-female ratio of 3.5. This finding is consistent with the results of Kanté, who reported 76.7% of cases in males with a sex ratio of 3.29 [4]. The male predominance in HCC is reported in several studies [5] [7] [9]-[13].

It is worth noting that in our study, the consumption of alcoholic beverages (both modern and traditional) was found in 2.6% of subjects, and tobacco use (cigarettes, chewing tobacco, pipe, and cigar) was reported in 11.7% of cases. Since most patients do not admit to consuming alcohol, our results are likely underestimated.

The proportion of patients with AFP levels above 400 ng/ml was 50%. This result is lower than the findings of Ibara *et al*., who reported 75.3% [7].

HBs antigen positivity was found in 33.3% of cases, which is lower than the rate reported by Kanté (69.17%) [4]. This percentage of HBV positivity confirms the close link between viral infection and the development of liver cancer, as reported in the literature. HCV serology was positive in 7 cases, with a frequency of 4.6%, compared to Kemayou *et al*., who found no positive cases of HCV serology [14].

The morphological aspect of tumors with a predominance of heterogeneous multi-nodules was found in 72 patients, accounting for 47.1% of cases. This is lower than the findings of Kanté, who reported 63.16% [4].

Cytology was performed in six patients; among them, liver cancer was confirmed in four patients. This result is comparable to Kemayou *et al*., who performed cytology on three patients, two of whom were confirmed to have HCC [14].

On the other hand, no patient underwent a biopsy, unlike the study by Ibara *et al*., who had a high rate of biopsies confirming HCC [11].

We have lost sight of 25% of our patients once the diagnosis has been confirmed. This is due to the strong influence of traditional therapists in our context.

5. Conclusion

Hepatocellular carcinoma remains a significant public health issue. Its predomin-

ance in men and its occurrence in adults with factors such as viral infections and ethylism mean that prevention of this pathology could greatly reduce its incidence.

Conflicts of Interest

The authors declare no conflicts of interest.

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