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Isolated metastasis of hepatocellular carcinoma in the right atrium: a case observed in a university hospital in West Africa (Bouake, Ivory Coast)

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ABSTRACT

Intracardiac metastases from hepatocellular carcinoma (HCC) are rare and have a poor prognosis. We report an observation in a West African university hospital in a 39-year-old black patient admitted with upper gastrointestinal bleeding. Clinical examination noted signs of cirrhosis, namely hepatocellular failure, portal hypertension, melena and signs of right heart failure against a background of deterioration in general condition (WHO-3). The CT scan showed a focal hepatic lesion with arterial enhancement and portal lavage compatible with HCC and a right intracardiac mass taking contrast. Doppler echocardiography confirmed the presence of a large heterogeneous mass occupying almost the entire right atrium. Palliative and symptomatic treatment was instituted in the patient improving his clinical condition. His death occurred two months after his release. The intracardiac localization of HCC, although rare, is not exceptional and of appalling prognosis. It should be sought in the assessment of the extension of HCC, especially in the presence of signs of cardiac involvement.

Keywords: Intracardiac metastasis, Right atrium, Hepatocellular carcinoma, west Africa.

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Introduction

Hepatocellular carcinoma (HCC) is a common cancer in areas of high prevalence of chronic liver disease. Its intracardiac extension is rare [1]. An incidence of less than 6% is reported in an autoptic series [2]. Invasion of the heart chambers occurs by intravascular extension from the inferior vena cava. The lack of symptomatic specificity of this cardiac metastasis does not always allow its early diagnosis. All the data in the literature agree on the pejorative nature of this localization, however the treatment can improve the quality of life [3]. Cases in West Africa, an area of high prevalence of HCC are rare [1] and to our knowledge none has been described in Ivory Coast, we report a case of isolated right antral metastasis of accidental discovery observed in Ivory Coast precisely at the Bouake University Hospital.

Observation

A 39-year-old patient with no particular history was admitted on February 9, 2021 for upper gastrointestinal bleeding (melena and hematemesis). The somatic examination on admission found a deterioration in general condition (WHO 3), paleness of the skin and mucous membranes, jaundice, respiratory rate at 25 cycles / minute, pulse at 144 / minute, blood pressure at 100/50 mmHg and a temperature of 39 ° C. The hepato-digestive examination found hepatomegaly with a sharp and painful lower border, moderate free ascites, edema of the lower limbs, collateral thoraco-abdominal venous circulation, stage II hepatic encephalopathy and melena on rectal examination. There was a spontaneous turgor in the jugular veins. The spleen was not palpable. The rest of the exam was normal. An infection of the ascitic fluid had been demonstrated with an exudative citrus yellow fluid (45g / l) and rich in cells predominantly neutrophilic (1400 Polynuclear / mm3), on the hemogram: (White blood cells = 11,000 elements / mm , Hemoglobin = 6.6g / dl, Platelets = 140,000 elements / mml), C Reactin Protein (CRP) at 96 mg / l, cytolysis with ASAT at 3 N, ALT at 1.5 N, total bilirubinemia at 12 mg / l, the Prothrombin rate at 67% and the albuminemia at 20 g / l. The alpha-fetoprotein level was 800ng / ml, the HBsAg and antiHBc AC were positive, and the HCV and HIV serologies were negative.

Figure 1: Thoracoabdominal CT scan: right atrium thrombus (arrowhead)

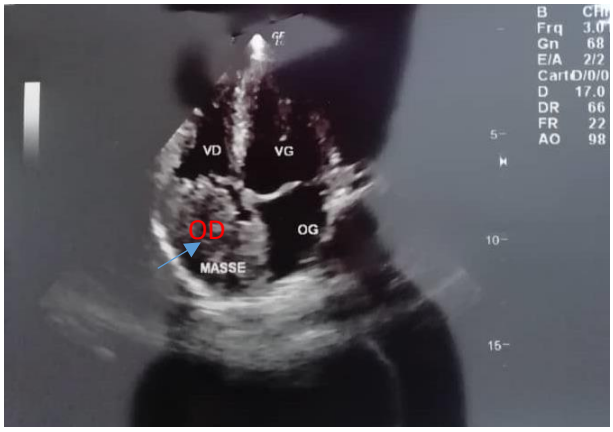

Figure 2: Echocardiography: mass of the right atrium

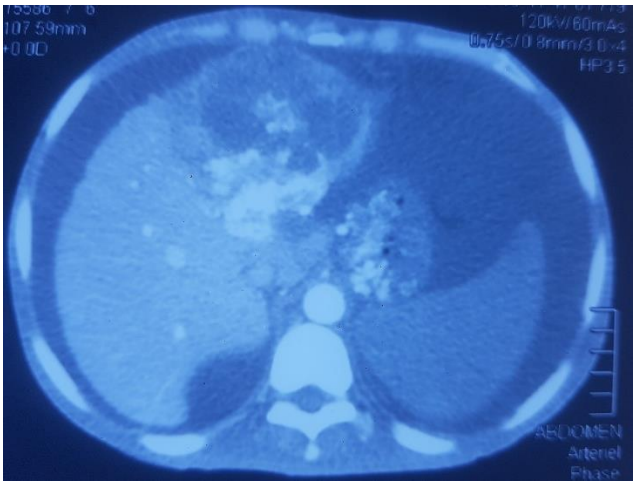

Figure 3: Thoracoabdominal CT scan: liver segment VI tumor

Upper gastrointestinal endoscopy showed grade III esophageal varices with red signs and gastroraphia with moderate portal hypertension. The thoraco-abdominal CT scan (figures 1 and 3): revealed a focal lesion of 11 cm in segment VI of the liver with early arterial contrast uptake followed by portal lavage on a dysmorphic liver with irregular contours, a large mass of the liver. right atrium and ascites of great abundance. Absence of thoracic and coelio-mesenteric lymphadenopathy. Absence of portal thrombosis. Doppler echocardiography (Figure 2) confirmed the presence of a large heterogeneous mass occupying almost the entire right atrium (6 cm). The diagnosis of HCC in viral B cirrhosis complicated by right intracardiac metastasis without inferior vena cava thrombosis and infection of the ascitic fluid was retained. Cardiac metastasis was suggested due to radiological features compatible with HCC in cirrhosis and the absence of another primary tumor identified. An isogroup and isorhesus blood transfusion was performed. For the prevention of varicose hemorrhage, the patient underwent esophageal varices ligation associated with propranolols. The rest of the treatment included Amoxicillin + Clavulanic acid for ascites fluid infection, lactulose for encephalopathy, tramadol for pain, aldactone for ascites and tenofovir for HBV. This treatment had improved his clinical condition and the patient left the time for a multidisciplinary consultation for surgical management. The patient died 2 months after discharge from cardiovascular collapse and hepatocellular failure.

Discussion

In the Ivory Coast, hepatocellular carcinoma is the most common malignant digestive tumor, at

67.8% [4]. Although sub-Saharan Africa is an area of high prevalence of HCC due to the high prevalence of hepatitis B and C virus infections, the secondary cardiac location is exceptionally in the literature [5,6]. Cardiac metastases from hepatocellular carcinomas are often described in autopsy series with a prevalence of 44% of post-mortem patients in Nigeria [7]. Cardiac lesions of hepatocarcinomas is most often asymptomatic and discovered incidentally during primary cancer surveillance or post-mortem at autopsy [3,7]. In our case, the patient presented signs of heart failure (dyspnea, edema and turgor of the jugular veins).

In the literature, the clinical manifestations of intracardiac metastases are dominated by signs of heart failure with in particular dyspnea, edema of the extremities and turgor of the jugular veins [8]. The lack of early detection of viral hepatitis B and of possible management in our patient could explain the late diagnosis at the stage of his HCC with intracardiac metastasis, as also reported by Mbengue in Senegal [5]. In Africa, the diagnosis of chronic liver disease is most often made at the late stage of decompensation or complications due to beliefs, lack of financial means and insufficient technical platform [9]. The diagnosis of intracardiac metastases is made by medical imaging techniques such as doppler echocardiography, CT scan and magnetic resonance imaging [8]. As in our observation, the right atrial localization of HCC metastases is the most frequent topography; Involvement of the right ventricle is rare, and the left heart chambers are exceptionally involved [8]. From a therapeutic point of view, surgical excision can be attempted in the event of isolated intracardiac metastasis and of a poorly developed primary tumor [3]. However, the treatment remains most often palliative. This last attitude was recommended in our patient. The prognosis for unoperated intracardiac metastases is poor with a median survival of one to four months [5; 8]. The progressive risk is the occurrence of cardiovascular collapse, pulmonary embolism or sudden death. Our patient's survival was only 2 months consistent with the data in the literature [1; 6].

Conclusion

This observation draws the attention of physicians to the possibility of intracardiac metastases of HCC even though these are infrequent as described in the literature. The clinical manifestations are atypical. The diagnosis is made by imaging and the prognosis is very poor. Palliative surgical treatment improves survival. Therefore, this location must be part of the HCC extension report.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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To the hepatology staff of the Bouake university hospital

To the cardiologists of the Bouaké university hospital

To the imaging doctors of the Bouaké university hospital

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