Hepatocellular carcinoma in a non-cirrhotic liver. A case report

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Background: Hepatocellular carcinoma is one of the leading causes of deaths caused by cancer worldwide and mainly occurs in adults. The atypical case of a female adolescent patient with moderately differentiated hepatocellular carcinoma is presented.

Keywords: Hepatocellular carcinoma.

Case Report

General Surgery

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Liver carcinoma is the third cause of cancer death worldwide, only after lung and colorectal cancer, and represents approximately 5% of all neoplasms.[1]

These tumors can be classified as primary (hepatocarcinomas or cholangiocarcinomas) and metastatic.[2] Of the primary tumors, hepatocellular carcinoma, which originates in hepatocytes, is the most common type of primary liver tumor with 75-85% of cases.[1]

More than 70% of cases of hepatocellular carcinoma are found in Asian countries, with only 5% corresponding to countries on the American continent.[3] The most commonly associated risk factor is liver cirrhosis, whether due or not to viral infection, which is found in up to 85%-95% of cases of hepatocellular carcinoma. The main etiological factor mentioned in the literature is hepatitis B virus infection, others are hepatitis C virus infection, exposure to aflatoxins, alcohol intake, metabolic syndrome and nonalcoholic steatohepatitis.[3,4]

Liver carcinomas in young patients are rare, since the main incidence is in patients over 60 years of age. However, this may vary in countries with endemic hepatitis B virus infection. The male:female ratio is 4:1 cases.[4,5]

These tumors usually have an insidious evolution and do not present symptoms until advanced stages when the tumor generates symptoms due to mass effect.[6] This is why screening becomes very important, which should be performed by ultrasound every 6 months for patients diagnosed with liver cirrhosis since a doubling of the size every 2-4 months has been documented.[7]

The reason for this case presentation is mainly the age of the patient at diagnosis and the histological type found when the surgical procedure was performed.

Case report

A 19-year-old female patient, with no significant history, began 3 weeks prior to admission with sudden pain in the right upper quadrant, stabbing, transfictive, that occurred during the night, accompanied by unquantified fever, chills, and night sweats, which improved with the intake of analgesics and worsened with the right lateral decubitus position.

On physical examination, the abdomen is globose at the expense of a soft, depressible adipose panniculus, on palpation there is a hepatic margin 10 centimeters below the costal margin, with pain on superficial, middle and deep palpation in the epigastrium and right hypochondrium, frequent peristalsis and normal intensity, dull to the percussion. It is presented with the laboratories shown in Table 1.

Contrast-enhanced tomography of the abdomen (Figure 1): incipient right pleural effusion. The liver presents a lesion in the right lobe with an ovoid morphology, measuring 215 x 143 mm, hypodense in the simple phase with discrete areas of enhancement in the periphery in the contrast phase, causing displacement of the structures.

We proceed to perform hepatic angioembolization of the lesion at first, to subsequently perform right hepatectomy with right nephrectomy, a pathology sample is sent for definitive obtaining the histopathological result of: moderately differentiated hepatocellular carcinoma, with

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Leucocytes	**14.500**	Glucose	90
Hemoglobin	11.5	Urea	25.6
Hematocrit	38.1	BUN	12
MCV	88.8	Creatinine	0.6
MCHC	26.8	D Dimer	3984
Platelets	941800	ALT	12.4
Lymphocytes	10.1	AST	79.3
Neutrophils	12	Bilirubin	0.8
Fibrinogen	1108	Conjugated bil.	0.67
TP	18.3	DHL	1838
INR	1.5	Amylase	20
TTP	26.6	Lipase	16.7
CEA	0.3	CA 19-9	5.36

Table 1. Laboratories upon hospital admission.

trabecular and solid patterns.

Discussion

Hepatocellular carcinoma occurs mainly in elderly patients, being a rare presentation in young patients; however, in our case the histopathological study resulted in a moderately differentiated hepatocellular carcinoma.[4]

Imaging studies such as ultrasound support screening in patients who have a history that suggests a possible appearance of hepatocellular carcinoma at a certain time, however, in patients with no history it becomes difficult to carry out surveillance.[7]

In the computed tomography, since the lesion contains angiogenesis and significant vascularity, in the contrast-enhanced arterial phase, reinforcement of this will be seen. After the arterial phase there is a decrease in density, both in the portal phase, venous phase, and late phase. which is known as the washing phase.

On MRI, the lesion appears hypointense on T1 and hyperintense on T2. It has also been described that, in a hepatobiliary phase, that is, after the administration of hepatospecific contrast, the lesion is observed to be hypointense, and this can increase the sensitivity of the MRI from 83.3-85.7% to 90.5-91.7%.[8]

The "Barcelona Clinic Liver Cancer" or BCLC classification divides patients diagnosed with hepatocellular carcinoma into 5 stages; very early stage, early stage, intermediate stage, advanced stage and terminal stage, depending on different factors such as tumor size and quantity, functionality and

Figure 1. Computed tomography with coronal section. Liver that presents a lesion in the right lobe with an ovoid morphology, measuring 215 x 143 mm, hypodense in the simple phase with discrete areas of enhancement in the periphery in the contrast phase, causing displacement of the structures.

dissemination. It is the most used classification currently for the prognosis and treatment of patients.[9] Treatment is mainly based on the BCLC classification mentioned above, however, surgical management is chosen first, with resection of the tumor in patients with non-cirrhotic liver, since larger resections can be accepted, on the contrary, in livers with decompensated cirrhosis liver transplant is recommended.

Other treatments that can be used are ablation, chemoembolization or systemic treatments such as lenvatinib or the combination of atezolizumab and bevacizumab.[7]

Conclusion

The importance of this pathology is the possibility of curative treatment in the primary stages of the disease. Despite not being at a common age of presentation, it is important to maintain suspicion and carry out adequate scrutiny to reach an adequate diagnosis and provide definitive treatment.

Conflicts of interests

There was no conflict of interest during the study, and it was not funded by any organization.

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