Liver capsular retraction – not a specific sign of malignancy: a reminder

Sir,
I read with interest the article by Sans et al. on capsular retraction as a specific CT feature of malignant liver tumor [1]. However, I would like to emphasize that their conclusion that “capsular retraction is an uncommon but specific (100%) sign in malignant hepatic tumors” should be used with caution. I would like to focus attention on the specific benign entity that was also quoted in their work, i.e., confluent hepatic fibrosis. This type of fibrosis is seen in patients with advanced cirrhosis who are at risk of developing primary hepatic malignancies, and is associated with obvious volume loss.

Ohtomo et al. [2] published a study in “Radiology” in 1993 about the CT characteristics of focal hepatic abnormalities that were found in 14% of 420 patients with advanced cirrhosis of various etiologies without malignancy who underwent hepatic transplantation following the CT examination. Histologic evaluation of these lesions proved to be confluent fibrosis. They found retraction of the underlying hepatic capsula in 90% of the 49 wedge-shaped lesions. These wedge-shaped areas radiated from the porta hepatitis to the hepatic periphery, involving mainly either both the anterior segment of the right lobe and the medial segment of the left lobe, or only the former.

Radiologists should be familiar with this benign entity of confluent hepatic fibrosis, commonly associated with volume loss. Awareness of this hepatic pathology should prevent misinterpretation of capsular retraction as a specific sign of a malignant lesion, which could complicate advanced liver cirrhosis, as was claimed by Sans et al.

References


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Reply

Sir,
We thank R. Zissin for her interest in our report concerning liver capsular retraction. We agree with the contents of her letter. As we reported in our paper [Ohtomo K, Baron RL, Dodd GD et al. (1993) Confluent hepatic fibrosis in advanced cirrhosis: evaluation with MR imaging. Radiology 189:871–874], we can effectively find capsular retraction in end-stage cirrhosis; therefore, we wanted to highlight the fact that the knowledge of the disease, the topography, and the pattern (non-nodular band) of the hepatic lesion evoke the diagnosis of centro-hepatic fibrosis and not obligatorily the association with hepatocellular carcinoma.

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A giant cardiac hydatid cyst located in the left ventricle of the heart: MR imaging features

Sir,
A 25-year-old-female patient with left ventricular hydatid cyst is presented. The diagnosis was established by using two-dimensional echocardiography and MR, which provided exact localization of the hydatid cyst.

The patient was admitted with complaints of palpitations which were exacerbated by the effort, and fatigue for the past month. The physical examination did not reveal any abnormality except tachycardia. On electrocardiographic examination, T-wave negativity and sinus tachycardia were observed. A cystic mass with multiple loculations, which occupied three fourths of the left ventricle inferio-posteriorly, was detected on echocardiography (Fig. 1).

Magnetic resonance revealed multiple circular formations on the intermediary low signal on the T1 sequence (with regard to the cardiac cavities signal), and high signal on the T2 sequence. The left cardiac cavity was filled with intraluminal signal arising from slow blood flow on T1-weighted images (Fig. 2). A hemagglutination inhibition test revealed that the titer of antibodies to echinococcus was 1/200. Further screening of the patient did not reveal involvement in the other organs by the hydatid cysts. She refused the operation therefore she was put on albendazole treatment.

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Hydatid disease (echinococcosis) is a parasitic infection. Humans can become infected by contact with a definitive host (e.g., a dog) or by eating contaminated food. Hatched parasitic embryos migrate through the intestinal mucosa and enter venules and lymphatics. The liver filters 60–70% and retains them. If embryos bypass the liver, they reach the lungs via the inferior vena cava and the right side of the heart. The parasite may reach the left side of the heart via the lymphatics that drain through the thoracic duct into the superior vena cava [1, 2]; however, cardiac involvement by hydatid disease is rare, with a prevalence of 0.02–2% [1].

The clinical presentation of cardiac hydatid disease is variable and the diagnosis is difficult. Since cystic mass grows slowly, it is usually asymptomatic or it may present with atypical or mild symptoms suggesting the coronary artery disease, valvular heart disease, pericarditis, or bronchopneumonia [3]; however rupture of the hydatid cysts may induce embolism or life-threatening anaphylactic shock [4]. Because of these potentially lethal complications, early diagnosis is very important.

Echocardiography is an effective technique that facilitates a quick and easy anatomical and topographic diagnosis, as well as the multivesicle aspect of the cyst. It can also inform about ventricular function and cardiac hemodynamic status. On the other hand, echocardiography has some major limitations such as the possible lack of an adequate sonic window in the thoracic wall and difficulty in evaluation of a cystic mass with extension to, or adjacent to, mediastinal structure.

The diagnostic value of MR for the cardiac hydatid cyst is relatively recent and offers several advantages. It provides precise information as to the location of cyst, efficiently delimits its cardiac and/or extracardiac component, and permits to exploration of its nature.

It is a non-invasive technique which gives different signal intensity of the blood with respect to other tissues. Differences in the blood flow rates allows disclosure of the precise relationships between normal tissues and pathological masses on MR assessment.

In the presence of any nonspecific cardiac symptoms or electrocardiographic abnormalities, such as T-wave negativity, further assessment should be performed and the differential diagnosis of a cardiac hydatid cyst should be made especially in the countries where echinococcosis is endemic.

References


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