

# A pitfall in diagnosing focal lesions of the liver

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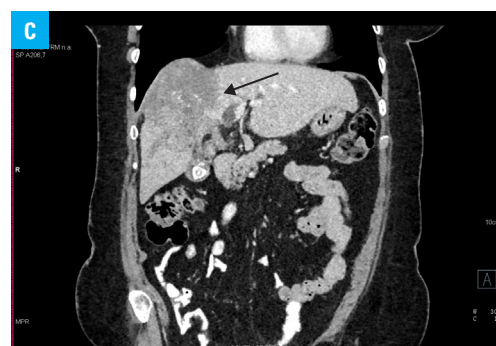
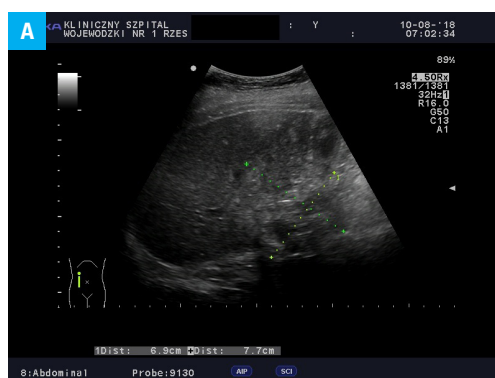
A 70-year-old woman with jaundice, reporting a progressive long-term weight loss and increasing daily fatigue, was admitted to our department for further diagnosis. Biochemical tests suggested that it was cholestatic jaundice, while diagnostic imaging (ultrasound [US] and computed tomography [CT] of the abdomen) revealed an irregular mass, approximately 70 × 75 × 100 mm in the 8th and the 5th segments of the liver. The suspected malignant tumor filled the liver, infiltrated the common bile duct, adhered to the duodenum and the head of the pancreas, and caused dilation of the intrahepatic ducts (FIGURE 1A–1C).

In view of the radiological evidence, which suggested that the pressure exerted by the mass of the tumor on the biliary ducts was the most likely cause of jaundice, an endoscopic retrograde cholangiopancreatography was performed. A plastic

stent was inserted into the bile duct of the right liver lobe, resulting in successful bile drainage.

Due to the limited possibility for a surgical intervention, a liver biopsy was postponed until the results of serological tests for parasitic infestations were obtained. Immunoenzymatic tests (antibody titers measured by an enzyme-linked immunosorbent assay) indicated positivity for echinococcosis. For this reason, the patient was referred to the Department of Infectious Diseases, where infestation with *Echinococcus multilocularis* was confirmed by a Western-blot assay.

Echinococcosis is a rare parasitic infestation caused by larvae of the echinoid tapeworm, most often the *E. granulosus* and less frequently *E. multilocularis*. In Poland, based on data published recently by the National Institute of Public Health, only 75 cases of *Echinococcus* infection



**FIGURE 1** **A** – ultrasound examination of the liver. A visible focal lesion of the right lobe (green marker). **B** – abdominal contrast-enhanced computed tomography scan: transverse section. A visible large focal lesion of the right lobe of the liver (arrow); **C** – abdominal contrast-enhanced computed tomography scan: longitudinal section. A visible large focal lesion of the right lobe of the liver (arrow).

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Received: October 29, 2018.  
Revision accepted:  
November 19, 2018.  
Published online: November 20, 2018.  
Conflict of interest: none declared.  
Pol Arch Intern Med. 2019;  
129 (1): 59-60  
doi:10.20452/pamw.4375  
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Kraków 2019

were reported in 2017. Humans are incidental hosts, with the cysts of the parasite usually located in the liver and other parenchymal organs. In the pharmacological treatment of echinococcosis, albendazol and mebendazol may be administered.<sup>1,2</sup> In the most severe cases, however, surgical treatment or even a liver transplant may be required.<sup>3</sup>

In 80% to 90% of patients with a typical course of *E. granulosus*, radiological imaging (US and CT) showing a large cyst containing debris is sufficient to diagnose this entity with high probability.<sup>4,5</sup> In the present case, however, the lesion in the liver parenchyma exhibited the characteristics of a solid mass infiltration obstructing the adjacent bile ducts, thus strongly imitating the neoplastic process. Moreover, for this patient, further routine invasive diagnostic tests such as liver biopsy could have led to dissemination of the parasite protoscolex.

In summary, in diagnosing focal lesions in the liver, parasitic infections, such as those caused by echinococcosis, should be considered because they often mimic symptoms of a neoplastic process. In such cases, invasive diagnostic methods, such as liver biopsy, may actually be harmful to the patient if carried out before using other readily available noninvasive methods.

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