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CLASSICS IN ABDOMINAL RADIOLOGY

Hepatization of the gallbladder

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Hepatization of the gallbladder is a recognized sonographic feature that can be observed in case of bile duct obstruction [1]. In hepatization, the gallbladder "mimics" the echotexture of the adjacent liver, appearing as a kind of camouflage (Fig. 1). This appearance is due to the accumulation of tumefactive sludge, rendering the gallbladder similar in echogenicity to the hepatic parenchyma (Fig. 2) [2]. Occasionally, it leads to nonvisualization of the gallbladder on sonography [1].

Biliary system diseases are a frequent cause of abdominal pain [3]. Nowadays, sonography is considered the initial imaging modality of choice for evaluating the biliary system [2]. The normal gallbladder has anechoic content and thin echoic wall [3]. In the setting of cholelithiasis, the presence of obstructing calculi, wedged in the gallbladder neck or in the common bile duct, leads to excessive accumulation of

Fig. 1 Image of animal camouflage: a Hypomecis roboraria larva mimicking the appearance of a branch. Courtesy of Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org (https://commons.wikimedia.org/w/index.php?curid=6612950). Accessed 20/04/2019

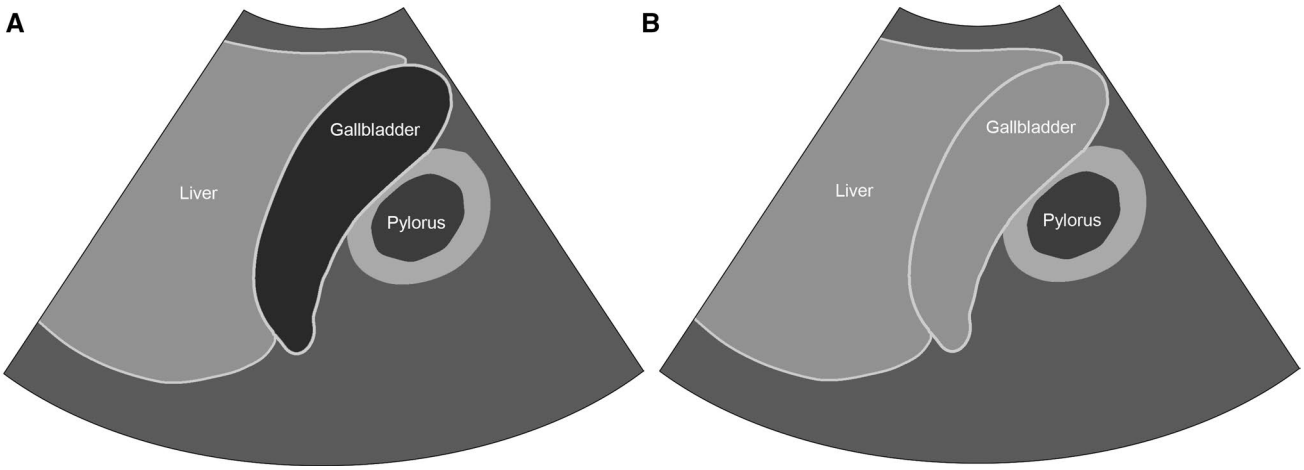

Fig. 2 Schematic images of ultrasound appearance of gallbladder. **a** Normal gallbladder with thin wall and anechoic content. **b** Hepatization of the gallbladder, completely filled with sludge, characterized by an echogenic appearance similar to that of the adjacent liver

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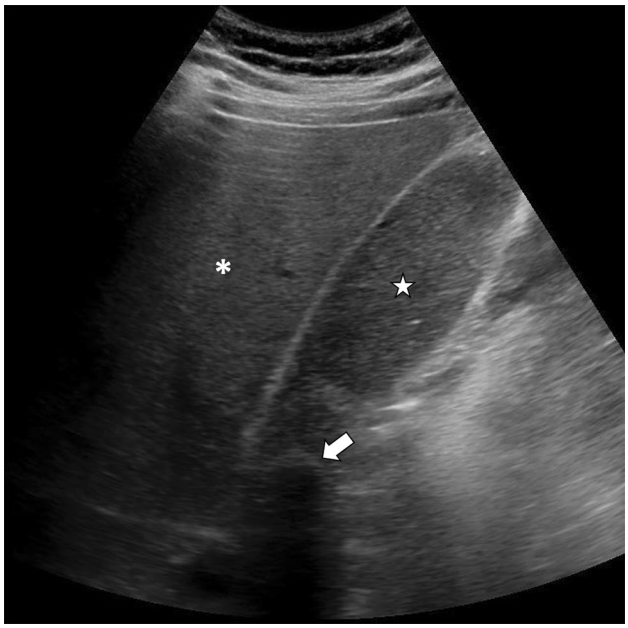

Fig. 3 Right subcostal oblique ultrasound image of the gallbladder fossa, obtained with a 5-MHz convex transducer, demonstrating the gallbladder lumen (star) filled with homogeneous nonshadowing echogenic sludge, having a sonographic pattern identical to the adjacent liver parenchyma (asterisk). Note a gallstone (arrow) causing obstruction of the gallbladder neck

bile within the gallbladder, which resembles the echogenicity of the liver. This appearance is also referred to as "hepatization of the gallbladder" (Fig. 3) [2, 3]. Doppler evaluation demonstrates no flow within the gallbladder, which helps distinguish it from the adjacent hepatic parenchyma.

Other conditions worth considering in the differential diagnosis for hepatization of the gallbladder include hyperalimentation and causes of extraluminal compression of the common bile duct, such as abdominal lymphadenopathy, and pancreatic and hepatic masses [2, 4].

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflicts of interest.

Research involving human participants and/or animals This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent Statement of informed consent was not applicable since the manuscript does not contain any patient data.

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