

Focal Steatosis in the Beaver Tail Liver

Mustafa Yıldırım^{ID}

Elazığ Fethi Sekin City Hospital, Clinic of Radiology, Elazığ, Turkey

A 52-year-old female patient with non-specific abdominal pain underwent ultrasound and contrast-enhanced computed tomography (CT). CT examination showed a lateral extension of the left liver lobe surrounding the spleen, which was compatible with the beaver tail liver. A focal hypodense lesion was determined in this area (Figure 1). Magnetic resonance imaging (MRI) was performed for the lesion characterization. MRI showed a loss of signal intensity on out-of-phase T1-weighted image compatible with focal steatosis (Figure 2).

Increased triglyceride accumulation within hepatocytes is referred to as hepatic steatosis. Hepatic steatosis is commonly characterized by nonalcoholic fatty liver disease and alcoholic liver disease, the 2 main disorders linked with it. Focal hepatic steatosis is determined as a geographic area. The subcapsular area and gallbladder fossa adjacent to the falciform ligament are characteristic locations for focal hepatic steatosis.^{1,2} Focal steatosis in the beaver tail liver could not be found in the literature. This case describes a patient with focal steatosis in the beaver tail liver.

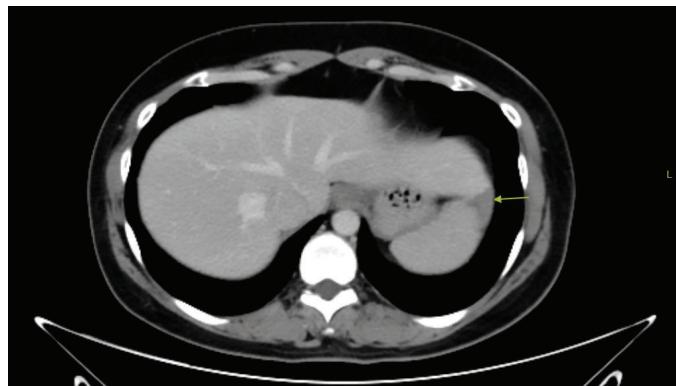


FIG. 1. CT examination shows a hypodense lesion in the beaver tail liver.

CT, computed tomography

One anatomical variation of the liver is the beaver tail liver, which can sometimes be confusing. It appears sonographically as a crescent-shaped hypoechoic region adjacent to the spleen. This left lobe is a continuation of the normal liver parenchyma and has no added risk of pathology. However, theoretically, it might be more vulnerable to injury after trauma to the left upper quadrant.



FIG. 2. Liver lesion shows the loss of signal intensity between the in-phase and out-of-phase T1-weighted image.



Corresponding author: Mustafa Yıldırım, Elazığ Fethi Sekin City Hospital, Clinic of Radiology, Elazığ, Turkey
e-mail: Mustafa23468@outlook.com

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ORCID iDs of the author: M.Y. 0000-0001-6874-9294.

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The most prevalent type of hepatic steatosis is diffuse hepatic steatosis, and another form is focal hepatic steatosis. The medial region of the left lobe is a typical site for localized fatty alteration. Most commonly, aberrant hepatopetal venous flow causes focal hepatic steatosis. These veins are the Sappey vein, pancreaticoduodenal vein, and the aberrant left and right gastric veins.³ Focal steatosis appears as increased hepatic echogenicity on ultrasound, and it has geographic borders sonographically without vascular distortion. On the sonographic examination, portal vein walls may not be visible in the focal steatosis area due to increased parenchymal echogenicity. In addition, decreased attenuation is seen on CT.

As a mass-like lesion, focal steatosis is detectable. Based on Hounsfield units, CT may not be able to detect the presence of fat. MRI can be used in these patients to detect unseen fat on CT.⁴ Focal hepatic steatosis can be distinguished from other lesions by its typical location, lack of mass effect, and normal vascular branches traversing the lesion. Focal liver steatosis may be confused with metastasis in patients with a primary tumor. Characteristic MRI finding of focal steatosis is the signal drop on out-of-phase, which is isointense on diffusion-weighted imaging and hepatobiliary phase image.⁵ Hemangioma, hepatic abscess, primary liver tumors, and metastases may be considered in the differential diagnosis.

We presented a case of focal steatosis in the beaver tail liver. This localization has not been previously described in the literature.

Informed Consent: Written informed consent was obtained from the patient.

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