

## PORTAL BILIOPATHY: CASE REPORT

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**Abstract:** Descriptions of sonographic findings and repercussions regarding abnormalities of biliary tract structures in a patient with portal cavernoma.

**Keywords:** Portal cavernoma; portal biliopathy; Cavernomatous transformation.

## REPORT OF CASE

L.F.M, male, 54 years old, presenting with jaundice, choluria and acholic stools. Past history of pleural effusion. He initially performed computed tomography showing a solid mass in the hepatic hilum and in the head of the pancreas. An abdominal ultrasound was performed, which found a liver with regular contours, homogeneous echotexture, without characterization of the portal vein and a hypochoic mass, which on the Doppler study showed tangles of portal vessels called portal cavernoma (Figure 1,2). There was also ectasia of the common bile duct and intrahepatic bile ducts due to the compressive effect of the mass, as well as splenic collateral vessels (Figure 3).

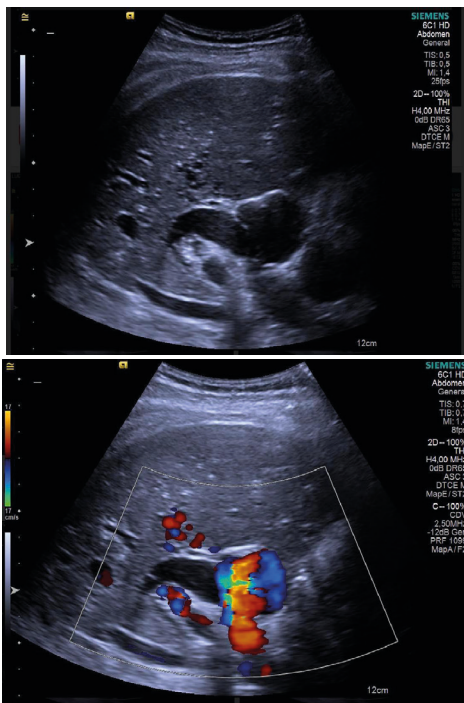


Figure 1: Portal vessel tangles (portal cavernoma) and no flow in the portal vein.

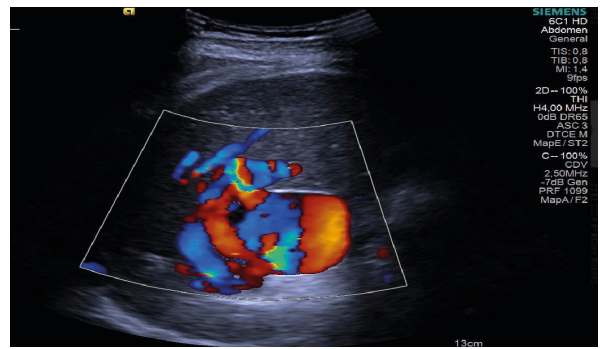


Figure 2: Portal Cavernoma.

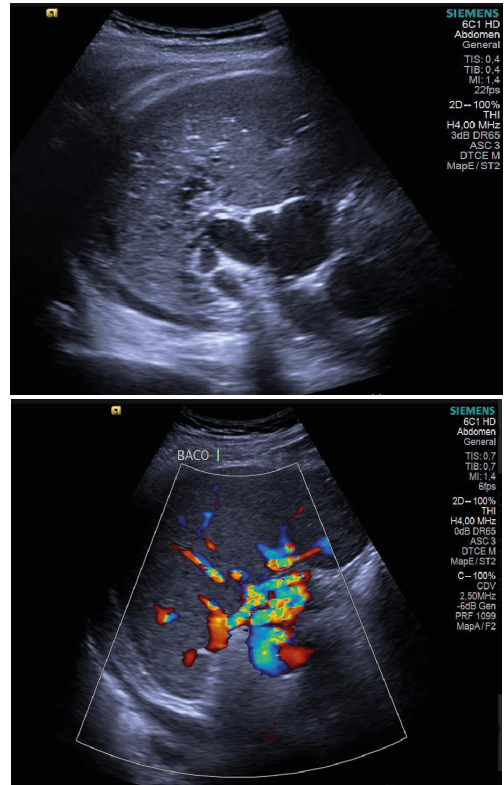


Figure 3: Splenic collaterals.

## DISCUSSION AND DIAGNOSIS

### FINAL CONSIDERATIONS

Abnormalities of the biliary tract structures (intra and extrahepatic bile ducts, cystic duct and gallbladder) are termed portal biliopathy and may be evidenced in patients with portal hypertension. One of the main causes is extrahepatic portal vein obstruction, but there are others such as: liver cirrhosis, idiopathic portal hypertension and portal

fibrosis. After obstruction of the portal vein, collateral vessels are created that will be responsible for the splenic venous drainage and the superior mesenteric vein resulting in a perihilar tubular venous network, this process is called cavernomatous transformation. After the process of venous thrombosis with cavernomatous transformation, extrinsic compression of the biliary tract occurs, resulting in inflammatory and ischemic changes, leading to fibrosis and recurrent cholangitic phenomena.

Portal biliopathy is a term used for abnormalities in the biliary tract due to a portal change. The main cause is obstruction of the portal vein, most commonly extrahepatic, which create collateral vessels to supply drainage of venous blood from the spleen and superior mesenteric vein. Most patients are asymptomatic, but they may have symptoms related to biliary tract obstruction. Treatment is most often done with splenorenal shunts.

## REFERENCES

- 1.Gossard AA, Talwalkar JA. **Cholestatic liver disease**. Med Clin North Am. 2014;98:73-85.
- 2.Harmanci O, Bayraktar Y. **How can portal vein cavernous transformation cause chronic incomplete biliary obstruction?** World J Gastroenterol 2012; 18(26): 3375-3378
- 3.Khan, M.R., Tariq, J. and Raza, R.M.S. (2012) **Portal Hypertensive Biliopathy: Review of Pathophysiology and Management**. Tropical Gastroenterology, 33, 173-178. <https://doi.org/10.7869/tg.2012.44>
- 4.Walser EM, Runyan BR, Heckman MG, et al. **Extrahepatic portal biliopathy: proposed etiology on the basis of anatomic and clinical features**. Radiology. 2011;258:146–53.