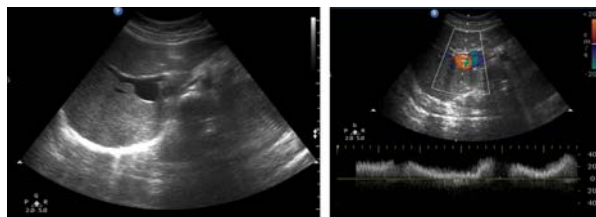


## Aneurysm of Right Branch of Portal Vein in a Child

Portal vein aneurysm (PVA) is a rare congenital or acquired abnormality of the portal circulation which constitutes for about 3% of reported venous aneurysms in children and adults [1]. In majority of the cases, they are asymptomatic, and are detected incidentally on imaging of the abdomen. Only few cases of PVAs have been reported in children. We evaluated a 12-year-old girl for intermittent abdominal pain. She did not have history of abdominal trauma or major illness in past. Hemogram, liver function tests and renal functions, including urine microscopy were normal. As a part of routine investigation, she underwent ultrasonography of abdomen which showed an anechoic structure along the course of right branch of portal vein (**Fig. 1a**). On color doppler, the lesion showed color fill with venous waveform pattern on spectral analysis (**Fig. 1b**) suggestive of venous aneurysm which was confirmed by dual phase computed tomography (CT) study (**Fig. 2**). Upper gastrointestinal endoscopy, done to rule out portal hypertension, was normal. Child was managed conservatively, and pain subsided after two weeks without any intervention.

PVA is a fusiform or saccular focal dilation of the portal venous system which was first described in an adult by Barzilai and Kleckner in 1956 [2]. The maximum dimension of the normal portal vein is upto 15 mm in normal individuals and 19 mm in case of cirrhosis. Thus the upper limit considered for labeling as portal vein aneurysm is taken above 20 mm as there is considerable variation in the size across different age groups [3,4]. Usually the dilatation of the portal veins occurs in the setting of hepatocellular disease and portal hypertension due to various etiologies. Congenital venous aneurysms occur without any predisposing conditions because of underlying weakness along the course of vein, and can be associated with anomalies of other organs. Color Doppler ultrasonography is considered to be the gold standard for the diagnosis of the venous system anomalies together with CT or Magnetic resonance angiography. The complications are spontaneous rupture into the bile ducts resulting in hemobilia, thrombosis, and obstruction leading to porto-systemic shunts [2]. Smaller and asymptomatic lesions are left without any intervention, and the larger ones need angiographic coiling or surgical aneurysmorrhaphy. To summarize, congenital PVAs are rare, usually asymptomatic, and can be managed conservatively.



**FIG. 1** (a) Transverse gray scale ultrasound image of liver showing anechoic lesion arising from right branch of portal vein (b) venous waveform on pattern spectral waveform analysis.



**FIG. 2** Coronal reconstructed CT image of venous phase showing saccular aneurysm arising from right branch of portal vein.

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**\*KP SRIKANTH AND BR THAPA**  
 Division of Pediatric Gastroenterology,  
 Department of Gastroenterology,  
 PGIMER, Chandigarh, India.  
 \*kpkantha@gmail.com

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