Partially thrombosed splenic vein aneurysm

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A 48-year-old woman was admitted to our hospital with abdominal pain and distention and two episodes of hemetemesis. She had no previous illness and no history of trauma, alcohol abuse or pancreatic disease. On admission, her blood pressure was 130/80 mmHg and pulse rate was 80/min and regular. She had mild pallor and the spleen was palpable (11 cm below the left subcostal margin). The hemoglobin level, peripheral blood count and biochemistry were normal except for serum glutamic oxaloacetic transaminases which were mildly elevated (36.0 IU). The grey scale ultrasound revealed moderate ascites and thrombus in the main portal vein. The spleen was enlarged (22.0 cm) with multiple collaterals at the splenic hilum. On Doppler examination the splenic vein in its middle portion showed an aneurysmal dilatation (measuring up to 2.8 cm in diameter), which was partially thrombosed. [Figure 1]. The distal portion of the splenic vein was patent and there was a thrombus seen in the main portal vein also [Figure 2]. The findings were confirmed on contrast enhanced computed tomography which also showed calcification in the wall of the aneurysm and main portal vein [Figure 3]. The upper gastrointestinal tract endoscopy showed Grade II esophageal varices which were treated successfully by sclerotherapy. As there was no complication encountered in our case, a decision was taken to conservatively manage the patient. On one-year follow-up, the patient is asymptomatic and there has been no increase in the aneurysm size on serial doppler examinations.

Discussion

Splenic vein aneurysm (SVA) is a rare clinical entity which can be congenital due to inherent weakness of the vessel wall or due to acquired conditions like liver disease, portal hypertension, trauma or inflammation. It is defined as an isolated abnormal fusiform or saccular dilatation of the splenic vein. The first case was described by Lowenthal and Jacob in 1953 and only ten such cases have been reported in the literature to date. Splenic vein aneurysm is a true aneurysm, which can be either congenital or acquired and portal hypertension and chronic liver disease are thought to be important contributing factors in the development of these aneurysms. The weakening of the vessel wall subsequent to trauma, inflammatory conditions like pancreatitis or local degenerative changes have also been implicated as possible causes of SVA.

While most abdominal venous aneurysms, including SVA are seen as incidental findings, the majority of these patients give
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Figure 3: Axial CECT abdomen image shows partially thrombosed aneurysm of splenic vein in its mid portion (black arrow). Note the peripheral calcification in the wall of the aneurysm. Partial thrombus is also seen in the main portal vein (white arrow). Also noted is ascites and splenomegaly with collaterals at splenic hilum

a history of mild abdominal pain or fullness. Some patients may present with crampy abdominal pain, jaundice or upper gastrointestinal hemorrhage secondary to portal hypertension.

The diagnosis of SVA can be made by ultrasonography. The color Doppler is the initial and preferred modality as it enables nonionising and noninvasive detection of SVA and is an excellent tool for follow-up. Modern CT scanners allow scanning in the arterial and venous phase separately and can clearly delineate SVA and any other associated abnormality. As there is risk of ionising radiation and iodinated contrast material involved in CT scan, MR angiography is emerging as a safe, fast and reliable technique for the diagnosis of SVA.

Because the incidence of these aneurysms is low and the natural history unclear, there are no established standards for indication and type of treatment. Most authors feel only close surveillance is required in asymptomatic patients, while surgical intervention is reserved for few symptomatic cases or if the aneurysm is increasing in size on follow-up imaging. The surgical options to treat SVA include plication, aneurysm resection with splenectomy, spleno-renal shunt and distal pancreatectomy.

References


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