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Intrahepatic Portal Vein Aneurysm in an Asymptomatic Patient*

Berhan GENÇ[1]
Aynur SOLAK[1]
Serkan GÜR[1]
Murat YALÇIN[2]

[1]Şifa Üniversitesi,
Tıp Fakültesi,
Radyoloji Anabilim Dalı
İzmir, TÜRKİYE

[2]Şifa Üniversitesi,
Tıp Fakültesi,
İç Hastalıkları Anabilim Dalı,
İzmir, TÜRKİYE

Aneurysms of the portal venous system, localized fusiform or saccular dilatations are rare clinical abnormalities. Most aneurysms are located in the extrahepatic segment and found rarely in intrahepatic branches. Portal vein aneurysm is a very rare but an important condition. In this case report, we report a case with portal vein aneurysm that was asymptomatic and had no sings suggestive of portal hypertension.

Key Words: *Portal hypertension, portal vein, venous aneurysm*.

Asemptomatik Bir Hastada İntrahepatik Portal Ven Anevrizması

Portal ven anevrizmaları sakküler ya da füziform olarak karşımıza çıkan nadir klinik patolojilerdir. Çoğu anevrizmalar extrahepatik portal ven dalında lokalize olmakla birlikte nadiren intra hepatik segmenttede görülebilir. Portal ven anevrizması nadir fakat önemli bir klinik durumdur. Biz burada asemptomatik, portal hipertansiyon bulgusu olmayan intrahepatik portal ven anevrizmalı bir olgu rapor ediyoruz.

Anahtar Kelimeler: *Portal hipertansiyon, portal ven, venöz anevrizma.*

Introduction

Portal vein aneurysm is a focal dilatation of the portal venous system. It can be in a fusiform or saccular configuration. It is a rare vascular anomaly being increasingly reported with more frequent use of radiologic investigations for the diagnosis and screening of abdominal disorders (1,2). Portal vein aneurysms are extremely rare. (3). Two forms of this abnormality, namely, congenital and acquired, have been described. Acquired aneurysms are more frequent and commonly associated with hepatic cirrhosis and portal hypertension (4).

In this case report, we report a patient with intrahepatic portal vein aneurysm that was asymptomatic and had no signs suggestive of portal hypertension.

Case Report

A 58-year old male was admitted to department of internal medicine for a prolonged abdominal pain and dyspepsia with no sings suggestive of portal hypertension. There was no history of jaundice, haematemesis, melanea, abdominal inflammation, or trauma. No abdominal mass was palpated. Liver function study tests were normal. Gastrointestinal system was initially investigated by abdominal ultrasonography that incidentally showed a portal vein aneurysm. Color-Doppler US (Figure 1) showed a turbulent flow inside the aneurysm (red and blue color). The intrahepatic portal vein aneurysm that was 30 mm in diameter was located at the connection point of the main and the left portal veins. The intrahepatic branches of the portal vein and the mesenteric vein were normal in caliber. The liver parenchyma was homogenous, and its size and contours were normal. Etiologic factors like portal hypertension, trauma, surgery, intervention to portal system, and hypercoagulability were not present in our patient.

There were no alterations in liver function, with normal bilirubin, albumin, and protamin time. The transaminases and canalicular enzymes were also normal, showing no hepatic cholestasis or hepatic injury. For further anatomical diagnosis, CT angiography was performed. There was an aneurysm with a diameter of 30x30 mm at the proximal site of the left portal vein (Figure 2, 3).

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Yazışma Adresi
Correspondence

Berhan GENÇ
Şifa Üniversitesi,
Tıp Fakültesi,
Radyoloji Anabilim Dalı,
İzmir - TÜRKİYE

be.genc@hotmail.com

* 32. Ulusal Radyoloji Kongresi, 2011, Antalya.

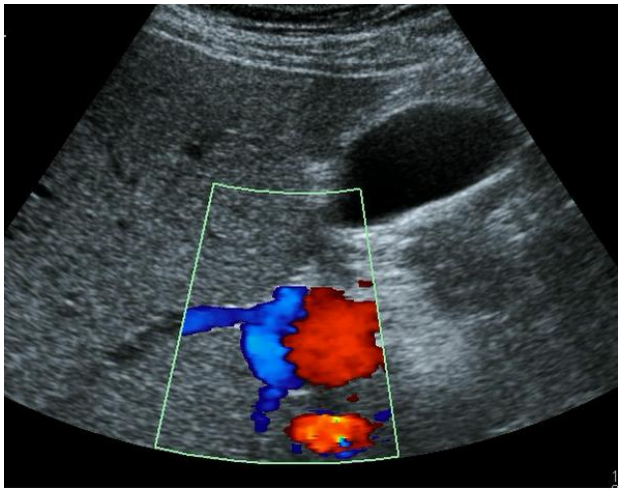

Figure 1. Color-Doppler US shows a turbulent flow inside the aneurysm (red and blue color)

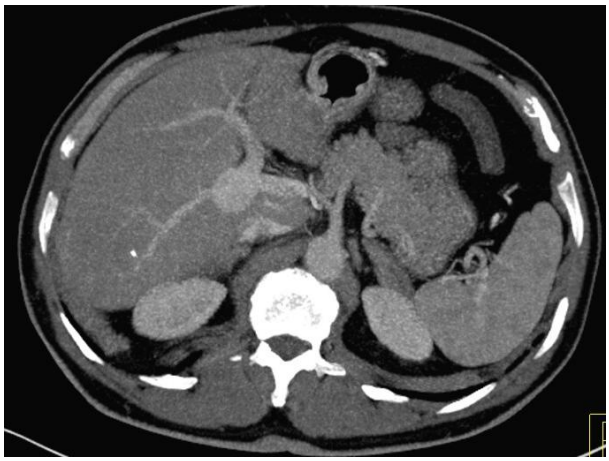

Figure 2. Axial CT scan. Portal venous phase scan shows the saccular aneurysm at the junction of the main and the left portal veins.

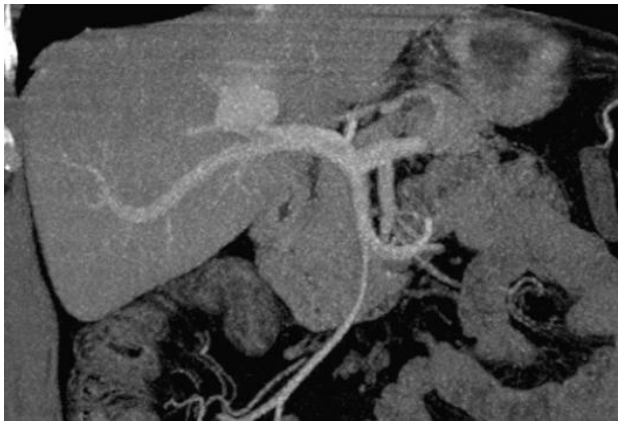

Figure 3. Reformatted three – dimensional coronal CT angiographic images demontrate saccular dilatation at the connection region of the main and the left portal veins.

Discussion

Intrahepatic portal vein aneurysm is still a rare vascular abnormality although new imaging modalities have been developed (5). Portal vein aneurysm can be defined as a localized dilatation of the portal vein beyond normal limits (6) and can be divided into extrahepatic and intrahepatic types. Main portal vein and its intrahepatic branches are the most commonly involved vessels although any portion of the portal venous system might be affected (7). Although long debated, the pathogenesis of portal venous system aneurysms has remained controversial (5, 8). A portal venous system aneurysm may be congenital or acquired as a result of weakening of the vascular wall.

Chronic liver disease, portal hypertension, pancreatitis trauma, and the effect of surgery have been reported as acquired causes of portal venous system aneurysm (2, 5, 9). In our case, the aneurysm may be of a congenital origin since there was no identifiable cause.

Majority of cases are clinically asymptomatic. In few patients, abdominal pain due to compression of adjacent structures, jaundice by compression of the biliary ducts, or gastrointestinal bleeding due to rupture of biliary system were reported (10). Portal vein aneurysms are frequently identified with US or Doppler US and confirmed with dynamic or multiphasic CT. Treatment of a portal vein aneurysm depends basically on the patient's initial clinical symptoms and the presence of associated portal hypertension (1). Most portal venous system aneurysms require no treatment and follow-up is sufficient (5).

In conclusion, portal vein aneurysm is a vascular pathology also seen in asymptomatic patients without portal hypertension. Treatment is unnecessary in asymptomatic cases but radiological follow-up is warranted for complications of the aneurysm.

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