Abstract

The purpose of this study was to offer a case case of an asymptomatic portal vein aneurysm diagnosed at multidetector computed tomography. Portal vein aneurysms are uncommon and challenging to diagnose or evaluate. However there are lots of imaging procedure that can help to facilitate diagnose or evaluate. Hence, the radiologist must be aware of these aneurysms and their imaging features.

Keywords: Aneurysm, multidetector computed tomography, portal vein
Introduction

Portal vein aneurysms (PVAs) are rarely and moreover incidence of which is less than 3% of all venous aneurysms. PVAs can be intrahepatic or extrahepatic, and their origin can be congenital or more often acquired. Acquired lesions generally related to hepatic cirrhosis or portal hypertension. But most of PVAs are uncomplicated and asymptomatic and noticed incidentally during diagnostic work-up. According to literature, an extrhepatic diameter of > 2.0 cm and intrahepatic diameter of > 0.9 cm is considered aneurismal.

Notice of the clinical aspects and imaging characteristics of portal venous system aneurysms is useful on the control of complications. The coming of cross-sectional imaging technology, particularly multidetector computed tomography (MDCT), has facilitated radiologists to diagnose many more venous variations and anomalies, including portal venous system aneurysms, of late years. This article reports a case study involving an individual diagnosed with intrahepatic PVAs. We report a case of an asymptomatic portal vein aneurysm diagnosed at multidetector computed tomography.

Case Report

A 65-years-old man, before now, was presented to right lower quadrant pain of approximately 2 weeks time. Physical examination was normal. There was no history of jaundice, hematemesis, melena, hematochezia, abdominal inflammation or trauma. He never underwent liver biopsy or surgery and had no history of chronic liver disease. Laboratory analysis including hepatic-related enzymes was within normal limits. He has a history of variable hypertension.

On MDCT examination, an aneurysmal sac connected to the left portal in segment IV. PVAs showing homogeneous enhancement equal to that of portal vein was detected. As a result confirming the diagnosis of PVAs. MDCT scan results were inspected with the patient, revealing an aneurysm measuring 21x19x14 mm, projecting distal bifurcation of the left portal vein. The aneurysm was fusiform configuration (Figure 1).

Gray-scale ultrasonography (US) represented an anechoic, 21 mm in sagittal diameter, rounded lesion in the IV hepatic segment. The maximal anteroposterior diameter of the aneurysmal dilatation measured 19 mm.

Color Doppler US analysis revealed whole filling of the lesion and bidirectional color owing to circular flow within aneurysm. Continuous nonpulsatile monophasic wave-form within the lesion was determined, which is typical for portal venous flow. A clear communication with the left portal vein was indicated. These findings were suitable with a left PVAs.

Discussion

Intrahepatic PVAs are rare vascular abnormalities and the origin of PVAs remains unclarified. The cause of PVAs, either congenital or acquired, has been defined, but it is still controversial. Causes include abnormality of the internal walls of the vessel or failure in the closure of the right primitive vitellin vein. On the other hand, most cases published in the literature are associated with hepatic or non-hepatic diseases that lead to portal hipertension; traumatisms and pancreatitis have also been involved in the development of these aneurysms. Our case is very probably congenital because no other cause was found.

There are some case reports of PVAs (extrahepatic or intrahepatic) in the literature. It has been reported that extrahepatic PVAs are more often and larger than intrahepatic PVAs.

The most frequent clinical presentations are abdominal pain, gastrointestinal bleeding, incidental finding and miscellaneous...
ous symptoms, which include abdominal swelling, fever, jaundice, malaise and weight loss. The clinical aspects are related to PVAs size. If PVAs are small, they may not produce symptoms. Complications of PVAs are portal vein thrombosis, portal hypertension, compression of the adjacent structures and aneurysmal rupture. Most PVAs require no treatment; follow-up is adequate.

Diagnostic imaging used includes color Doppler ultrasound, CT scan/MRI, angiography and direct or indirect portography. Color Doppler sonography and CT have been considered accurate and dependable methods for the diagnosis and follow-up imaging of PVAs and their complications. There is no literature consensus to imaging follow-up, owing to the infrequent nature of the diagnosis. As a consequence, PVAs are uncommon and challenging to diagnose or evaluate. However there are lots of imaging procedure that can help to facilitate diagnose or evaluate. Hence, the radiologist must be aware of these aneurysms and their imaging features.
References