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CLINICAL IMAGE

Celiac artery dissection in polycystic kidney disease

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Abstract

Autosomal-dominant polycystic kidney disease (ADPKD) is rarely complicated by celiac artery dissection. Dissection of the aorta and its major branches should be carefully differentiated in ADPKD patients with acute-onset abdominal pain.

KEYWORDS

autosomal-dominant polycystic kidney disease, hypertension and mesenteric artery dissection

Autosomal-dominant polycystic kidney disease (ADPKD) is rarely complicated by celiac artery dissection. Since ADPKD patients have a greater risk of aortic dissection, dissection of the aorta and its major branches should be carefully differentiated in ADPKD patients with acute-onset abdominal pain.

A 47-year-old man in whom a diagnosis of autosomal-dominant polycystic kidney disease (ADPKD) was made 3 years ago presented with sudden onset of sharp pain in the epigastric abdomen when he was resting around 2 a.m. on the previous night. The present patient did not have a symptom of fever, vomiting, or diarrhea. His medical histories were hypertension and chronic kidney disease (G3aA1), which were controlled well by 60 mg of telmisartan and 60 mg of tolvaptan per day. Physical assessment revealed epigastric abdominal tenderness without radiating pain. Prior to the imaging study, differential diagnoses including rupture of an abdominal aortic aneurysm and abdominal aortic dissection were considered. Contrast-enhanced computed tomography (CECT) showed multiple renal and hepatic cysts (Figure 1A), which are typical findings of ADPKD and celiac artery dissection with thrombotic occlusion of the false lumen (Figure 1B). Aortic aneurysms were not detected. We made a diagnosis of spontaneous isolated celiac artery dissection (SICAD), and conservative medical therapy was conducted with blood pressure control by continuation of the administration of telmisartan and tolvaptan. Potential complications of celiac artery dissection such as ruptured pseudoaneurysm and splenic infarction were not detected in the present case.[1] CECT performed 4 days after the development of SICAD showed no progression of the disease.

Autosomal-dominant polycystic kidney disease is associated with cardiovascular abnormalities such as intracranial aneurysms; however, complication of celiac artery dissection has been rarely reported. The risk factors for isolated mesenteric artery (superior mesenteric artery or celiac artery) dissection are male gender, hypertension, and smoking, though the present patient had been a non-smoker.[1] ADPKD patients are reported to have a 5.49-fold greater risk of aortic aneurysm and dissection than that in non-ADPKD counterparts,[2] whereas the prevalence of celiac artery dissection in ADPKD patients remains unknown because of its rarity. Clinicians should pay attention to dissection of the aorta and its major branches in ADPKD patients with acute onset of abdominal pain.

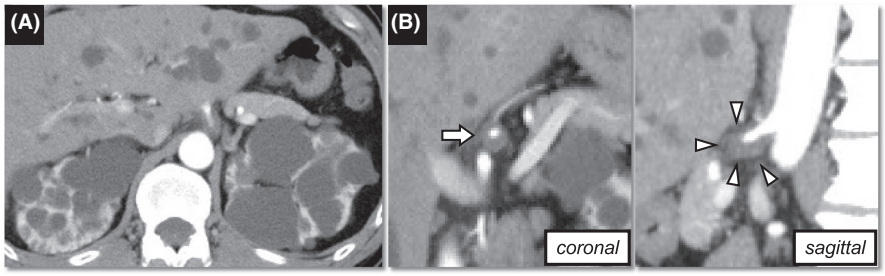

FIGURE 1 (A) Multiple renal and hepatic cysts were shown by contrast-enhanced computed tomography (CECT). (B) CECT showed celiac artery dissection with intramural hematoma only (left: arrow, coronal; right: arrowheads, sagittal)

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None.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

KY wrote the first draft and managed all of the submission processes. KH and KO contributed to the clinical management of the patient. FO organized the manuscript.

CONSENT

Written informed consent was obtained from the patient to publish this case report.

DATA AVAILABILITY STATEMENT

Not applicable.

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