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## Celiac artery dissection

*To the Editor:*

A 48-year-old man with treatment-naïve hypertension presented to the emergency department with sudden-onset subcostal pain that began abruptly while sitting. The pain persisted for several hours, was strangulating in nature, radiated to the back, and was associated with nausea and vomiting. He denied chest pain, cough, dyspnea, orthopnea, or neck pain. His medical history included cholelithiasis and appendicitis. He was a 20−pack-year smoker and lived alone. There was no significant family history, including cerebrovascular disease.

On presentation, he was alert and oriented. Vital signs showed a temperature of 36.0˚C, blood pressure of 162/90 mmHg, pulse of 88 beats per minute, respiratory rate of 22 breaths per minute, and oxygen saturation of 98% on room air. Cardiac auscultation revealed a regular rhythm without murmurs or gallops, and lung fields were clear bilaterally. The abdomen was soft and flat, with localized tenderness in the subcostal region.

The differential diagnosis for acute subcostal pain is broad and includes acute coronary syndrome, acute aortic disease, gastrointestinal perforation, superior mesenteric artery embolism, cholecystitis, pancreatitis, appendicitis, peptic ulcer disease, and urolithiasis. The abrupt onset in this case raised concern for a vascular or other catastrophic intra-abdominal process. Initial laboratory testing was unremarkable, including the D-dimer level. Electrocardiography demonstrated sinus rhythm without ST-segment abnormalities. Transthoracic echocardiography showed a left ventricular ejection fraction of 55% with no regional wall-motion abnormalities and no evidence of an aortic intimal flap.

Bedside abdominal ultrasonography (AUS) demonstrated a dissection originating at the celiac artery root, clearly distinct from the abdominal aorta (Fig. 1A), raising strong suspicion for celiac artery dissection. Contrast-enhanced computed tomography confirmed isolated celiac artery dissection (Fig. 1B) without evidence of end-organ malperfusion. A diagnosis of spontaneous isolated celiac artery dissection was established.

The patient was admitted to the intensive care unit for close monitoring and strict hemodynamic control. Blood pressure and heart rate targets (<120/80 mmHg and < 60 beats per minute) were achieved with sacubitril/valsartan, intravenous nicardipine, and bisoprolol. Pain was managed with continuous fentanyl infusion. His symptoms gradually resolved, and he was discharged in stable condition after 7 days of hospitalization.

Celiac artery dissection is an uncommon vascular condition, most often occurring as a spontaneous and isolated event without concomitant aortic involvement. Reported cases predominantly involve middle-aged men, with hypertension being the most frequently identified risk factor.[1] Less common associations include connective tissue disorders, atherosclerosis, and aneurysmal disease.[2] Symptomatic patients typically present with acute or subacute abdominal pain, and the clinical course is generally benign. Conservative management with blood pressure and heart rate control is effective in most cases.[3]

Despite its rarity, isolated celiac artery dissection represents an important diagnostic consideration in patients presenting with acute subcostal or epigastric pain. Clinical manifestations may resemble more common conditions such as acute coronary syndrome, biliary disease, peptic ulcer disease, or pancreatitis.[4] Although uncommon, complications such as visceral ischemia may occur when arterial flow to foregut organs is compromised. Persistent or worsening symptoms should prompt reassessment for progression, thrombosis, significant stenosis, or branch extension, which may require endovascular intervention.[2]

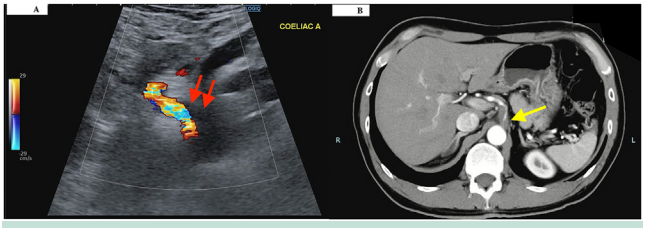


**Fig. 1** (**A**). Bedside abdominal ultrasonography demonstrated a dissection originating from the celiac artery root, consistent with an occlusive-type false lumen. The false lumen was completely thrombosed (red arrow), with a peak systolic velocity of 160 cm/s, and the true lumen showed approximately 60 % stenosis. (**B**) Contrast-enhanced CT revealed a celiac artery dissection with mild dilatation of the vessel to 10 mm and marked luminal stenosis (yellow arrow). The false lumen was thrombosed, with slight extension into the common hepatic artery.

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In summary, isolated celiac artery dissection should be considered in patients with acute subcostal pain when the initial evaluation for more common etiologies is unrevealing. Early recognition using AUS, especially closely observation of celiac artery root, may facilitate timely diagnosis and appropriate management.[2,4]

## Authorship

All authors had access to the data and a role in writing the manuscript.

## Abbreviation

AUS, Abdominal ultrasonography

## Declaration of competing interest

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