

VIDEOS IN EMERGENCY MEDICINE

Cardiovascular

Man with hypertension and abdominal pain

Morgan Pooler MD¹ | Andrew T. Reiter MD²  | Joseph S. Colla MD²

¹Department of Emergency Medicine, Medical College of Wisconsin, Milwaukee, Wisconsin, USA

²Department of Emergency Medicine, University of Illinois Hospital & Health Science System, Chicago, Illinois, USA

Correspondence

Andrew T. Reiter, Department of Emergency Medicine, University of Illinois Hospital & Health Science System, Chicago, IL, USA.

Email: drew.t.reiter@gmail.com

1 | PATIENT PRESENTATION

A 61-year-old with history of hypertension and atrial flutter on rivaroxaban presented to the emergency department from a cardiology clinic for uncontrolled hypertension. The patient reported intermittent, nonexertional, left-sided chest, and epigastric pressure. On examination, the patient had elevated blood pressure: left arm 240/131 and right arm 217/109. Vital signs were otherwise normal and physical examination was unremarkable. The patient's electrocardiogram showed no acute ischemic changes. Point-of-care ultrasound (Video 1 and Figure 1) and computed tomography angiography (CTA) (Figure 2) of the patient's aorta were obtained.

2 | DIAGNOSIS: SPONTANEOUS ISOLATED CELIAC ARTERY DISSECTION

Spontaneous isolated celiac artery dissection (SICAD) is a rare visceral arterial dissection, the second leading type after superior mesenteric artery dissection. Symptoms can range from an asymptomatic incidental finding to severe epigastric, back, or flank pain in middle-aged adults.^{1,2} The most prevalent risk factors include male sex, smoking, and hypertension.^{3,4} CTA is the primary modality used to diagnose SICAD worldwide. Findings include an intimal flap, which is pathognomonic, or a mural thrombus in the celiac lumen. Complications include organ ischemia, aneurysm formation, and rupture.⁵ First-line



VIDEO 1 Ultrasound clips of both the transverse and sagittal views of the celiac artery, aorta, and surrounding anatomy.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 The Author(s). *Journal of the American College of Emergency Physicians Open* published by Wiley Periodicals LLC on behalf of American College of Emergency Physicians.

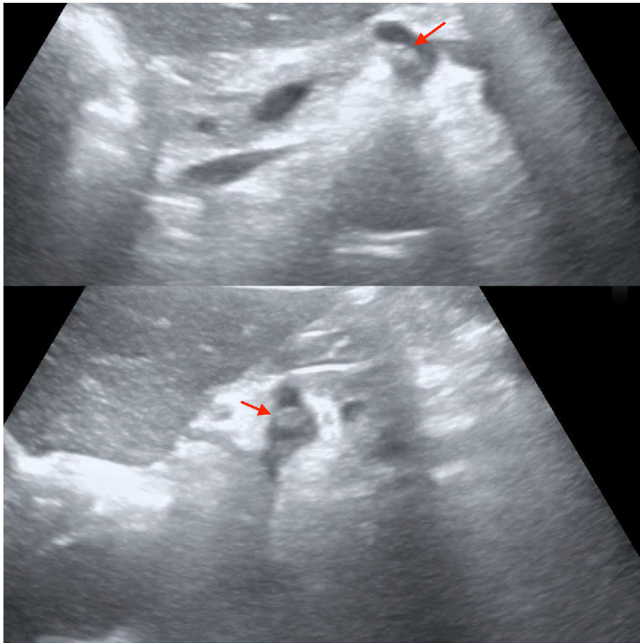


FIGURE 1 Ultrasound image showing a mural thrombus (red arrow) in the celiac artery in the top, transverse orientation and in the bottom, sagittal orientation.

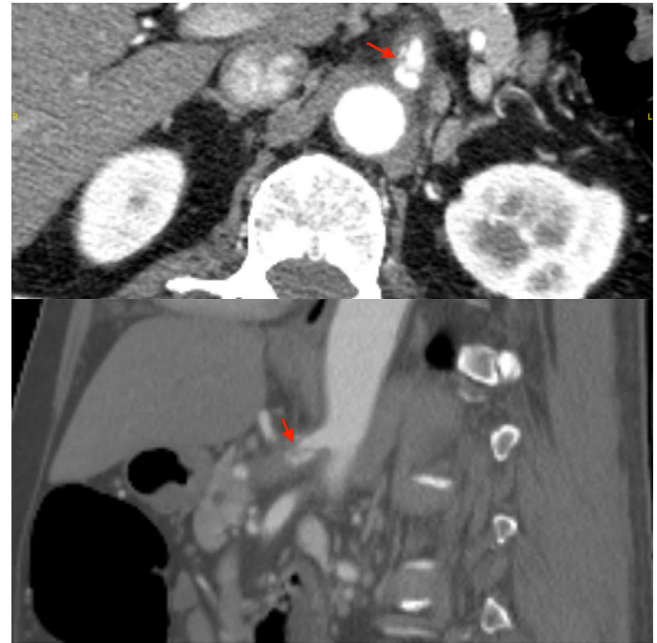


FIGURE 2 Computed tomography angiography showing a filling defect (red arrow) in the celiac artery in the top, coronal image and the bottom, sagittal image.

treatment for SICAD is conservative management including strict blood pressure control, antithrombotic therapy, and surveillance. Surgical and endovascular intervention are reserved for patients who have failed conservative treatment.⁶

Our patient was admitted to the cardiac intensive care unit on a labetalol drip to treat hypertensive emergency. Vascular surgery was consulted and recommended addition of a daily aspirin and atorvastatin to his home medications and smoking cessation. The patient was discharged home in stable condition on hospital day 2.

ORCID

Andrew T. Reiter MD  <https://orcid.org/0009-0009-3786-1270>

REFERENCES

1. Ko SH, Hye R, Frankel DA. Management of spontaneous isolated visceral artery dissection. *Ann Vasc Surg.* 2015;29(3):470-474. doi:10.1016/j.avsg.2014.10.026
2. Morgan CE, Mansukhani NA, Eskandari MK, Rodriguez HE. Ten-year review of isolated spontaneous mesenteric arterial dissections. *J Vasc Sur.* 2018;67(4):1134-1142. doi:10.1016/j.jvs.2017.08.071

3. Acosta S, Gonçalves FB. Management of spontaneous isolated mesenteric artery dissection: a systematic review. *Scand J Surg.* 2021;110(2):130-138. doi:10.1177/14574969211000546
4. Shi Y, Guo J, Dong J, Chen X, Luo L, Shen Y. Comparative analysis of prevalence, evaluation, management, and rehabilitation outcome of spontaneous isolated visceral artery dissection: a systematic review and meta-analysis of 80 reports. *Int J Surg.* 2023;109(3):469-480. doi:10.1097/JS9.000000000000301
5. D'Ambrosio N, Friedman B, Siegel D, Katz D, Newatia A, Hines J. Spontaneous isolated dissection of the celiac artery: CT findings in adults. *Am J Roentgenol.* 2007;188(6):W506-W511. doi:10.2214/AJR.06.0315
6. Zhu F, Zhang L, Shang D. The management of spontaneous isolated celiac artery dissection: a case report and literature review. *Vascular.* 2023. doi:10.1177/17085381231197931

How to cite this article: Pooler M, Reiter AT, Colla JS. Man with hypertension and abdominal pain. *JACEP Open.* 2024;5:e13230. <https://doi.org/10.1002/emp2.13230>