

IMAGES IN EMERGENCY MEDICINE

Cardiology

Woman with abdominal pain

Jordan Allen McQuilkin MD¹  | Maxwell Hockstein MD²¹Department of Emergency Medicine, Emory University School of Medicine, Atlanta, Georgia²Emory University School of Medicine, Atlanta, Georgia**Correspondence**

Jordan Allen McQuilkin, MD, Department of Emergency Medicine, Emory University School of Medicine, Atlanta, GA.

Email: jmcqui2@emory.edu

Funding and Support: By *JACEP Open* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.**1 | PATIENT PRESENTATION**

A 76-year-old woman with an unknown past medical history presented to the emergency department with severe abdominal pain. She had a heart rate of 89 beats/min and a blood pressure of 96/57 mm Hg. A venous blood gas showed a pH of 6.9, and orotracheal intubation was performed for altered mental status. The emergency physician performed point-of-care ultrasound, which revealed an underfilled left ventricle, as well as the following image (Figure 1; Video 1).

2 | DIAGNOSIS

Ruptured abdominal aortic aneurysm. The patient was taken emergently to the operating room by vascular surgery for an open aortic repair. Massive transfusion protocol was initiated in the operating room, including 70 units of packed red blood cells, and was continued in the surgical ICU. On hospital day 3, she suffered a cardiac arrest. Return of spontaneous circulation was obtained, but she remained on high dose vasopressors and inotropes. She progressed to multisystem

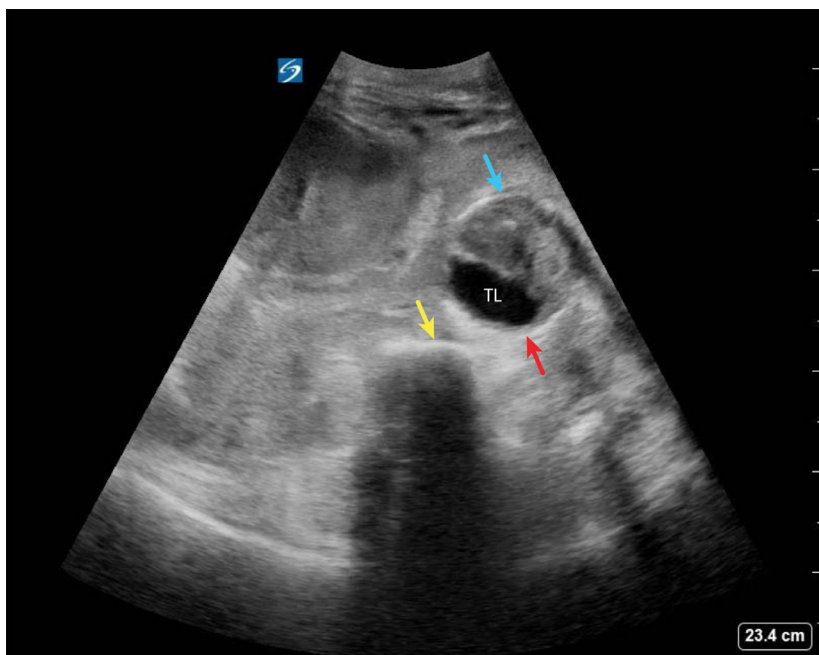


FIGURE 1 Bedside ultrasonography displays extensive hemoperitoneum and an aneurysmal infrarenal abdominal aorta with extensive intramural hematoma, indicating an aneurysmal abdominal aorta with rupture (TL, true lumen; blue arrow, anterior wall of abdominal aorta; red arrow, posterior wall of abdominal aorta; yellow arrow, anterior aspect of the spine/vertebral body)

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs 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.

© 2020 The Authors. *JACEP Open* published by Wiley Periodicals LLC on behalf of the American College of Emergency Physicians.

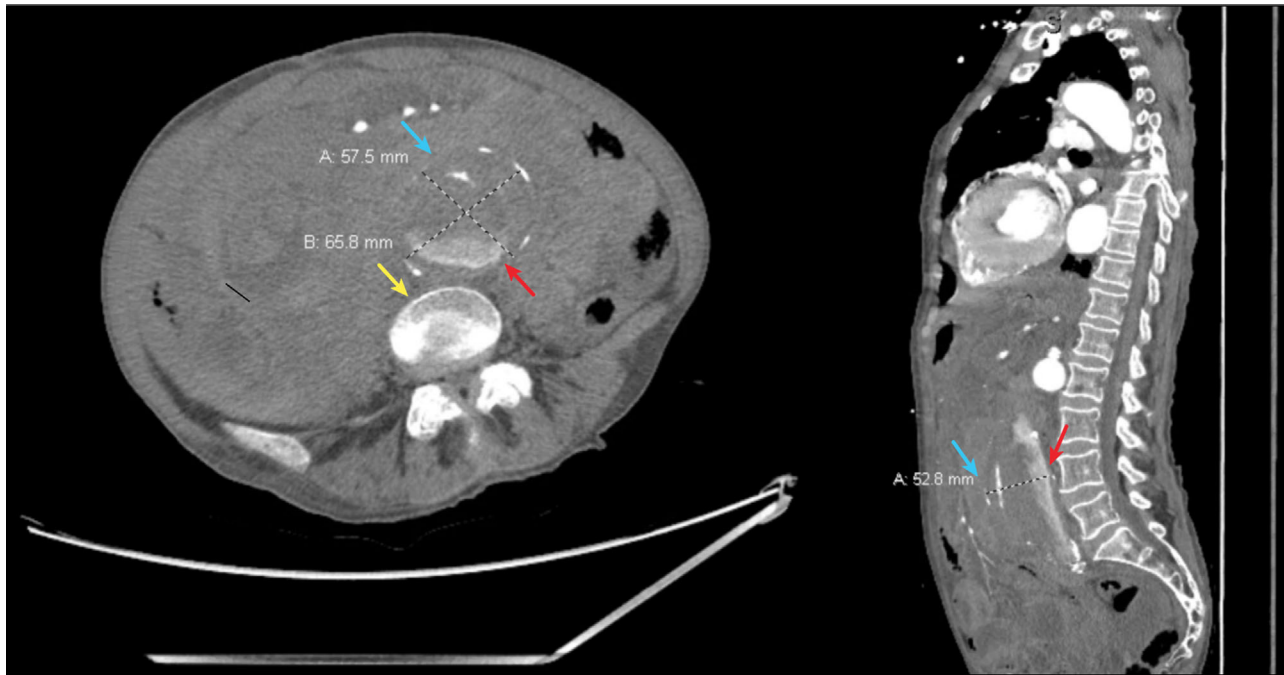


FIGURE 2 Computed tomography aortogram confirmed an aortic aneurysm and a large-volume hemoperitoneum consistent with an aortic aneurysm rupture at the infrarenal aorta extending to the bilateral proximal common iliac arteries (blue arrows, anterior wall of the abdominal aorta; red arrows, posterior wall of the abdominal aorta; yellow arrow, anterior aspect of the spine/vertebral body)

organ failure, and her family decided to transition to comfort measures only later that day.

Ruptured abdominal aortic aneurysm is a devastating condition, with an $\approx 53\%$ mortality rate in women and 44% in men, excluding the nearly 60% of patients who die before reaching the ED.^{1,2} Although most patients with ruptured abdominal aortic aneurysm present with abdominal pain, $\sim 25\%$ of patients will present with non-specific findings.³ Thus, bedside ultrasonography is a paramount and a highly sensitive tool in the timely identification of aneurysm in the unstable patient.⁴ Definitive management options include open repair or an endovascular approach.⁵

AUTHOR CONTRIBUTIONS

MH acquired the image. JAM drafted the manuscript and formatted the images. All authors were involved in content editing.

ORCID

Jordan Allen McQuilkin MD 

<https://orcid.org/0000-0003-0560-0710>

REFERENCES

1. Dillavou ED, Muluk SC, Makaroun MS. A decade of change in abdominal aortic aneurysm repair in the United States: Have we improved outcomes equally between men and women? *J Vasc Surg.* 2006;43:230-238; discussion 238.

2. Ingoldby CJ, Wujanto R, Mitchell JE. Impact of vascular surgery on community mortality from ruptured aortic aneurysms. *Br J Surg.* 1986;73:551-553.
3. Rinckenbach S, Albertini JN, Thaveau F, et al. Prehospital treatment of infrarenal ruptured abdominal aortic aneurysms: a multicentric analysis. *Ann Vasc Surg.* 2010;24:308-314.
4. Rubano E, Mehta N, Caputo W, Paladino L, Sinert R. Systematic review: emergency department bedside ultrasonography for diagnosing suspected abdominal aortic aneurysm. *Acad Emerg Med.* 2013;20:128-138.
5. Thomas DM, Hulten EA, Ellis ST, et al. Open versus endovascular repair of abdominal aortic aneurysm in the elective and emergent setting in a pooled population of 37,781 patients: a systematic review and meta-analysis. *ISRN Cardiol.* 2014;2014:149243.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

How to cite this article: McQuilkin JA, Hockstein M. Woman with abdominal pain. *JACEP Open.* 2020;1:300-301.

<https://doi.org/10.1002/emp2.12049>