Hiatal Hernia Mimicking Aortic Aneurysm on Point-of-care Echocardiography

https://escholarship.org/uc/item/9631f634

Clinical Practice and Cases in Emergency Medicine, 1(4)

2474-252X

Langberg, Sam
Favot, Mark

2017

10.5811/cpceem.2017.6.33450

https://escholarship.org/uc/item/9631f634#supplemental

CC BY 4.0

Peer reviewed
Hiatal Hernia Mimicking Aortic Aneurysm on Point-of-care Echocardiography

Sam Langberg, MD*†
Mark Favot, MD*‡

Section Editor: Rick A. McPheeters, DO
Submission history: Submitted December 28, 2016; Revision received May 25, 2017; Accepted June 1, 2017
Electronically published October 3, 2017
Full text available through open access at http://escholarship.org/uc/uciem_cpcem
DOI: 10.5811/cpcem.2017.6.33450

CASE PRESENTATION
An 85-year-old woman presented to the emergency department (ED) with altered mental status. She appeared to be in shock with a distended abdomen. A point-of-care (POC) echocardiogram using a 4 Mhz phased array transducer revealed a large anechoic mass posterior to the left atrium concerning for an aneurysm of the descending thoracic aorta (DTA). (Image, Video) However, computed tomography revealed high-grade small bowel obstruction, associated with a hiatal hernia.

DIAGNOSIS
The detection of hiatal hernia on echocardiography has been described in the cardiology literature; however, this case highlights a patient in shock who was diagnosed by POC echocardiography by emergency physicians (EP). Given the increased use of POC echocardiography by EPs, it is important to recognize mimics of life-threatening conditions. In the Image, a parasternal long-axis (PLAX) view reveals an anechoic mass posterior to the left atrium with multiple hyperechoic echoes within it, which raised suspicion for a DTA aneurysm. Other critical diagnoses in this anatomic region include aortic dissection, loculated pericardial effusion, left atrial or ventricular aneurysms.

When suspicious for a hiatal hernia on echocardiography, be certain to visualize the object of interest in at least two windows. The inner lining of the structure should be thick (6-13mm) and resemble stomach mucosa with the presence of microbubbles. A diagnosis may be confirmed after having the patient drink a

Image. Parasternal long-axis window with anechoic mass (arrow) with microbubbles posterior to the left atrium (LA) and left ventricle (LV) but anterior to the descending thoracic aorta (DTA). Despite mimicking life-threatening aortic pathology, this is a fluid-filled hiatal hernia.
Hiatal Hernia Mimicking Aortic Aneurysm on Point-of-care Echocardiography

Langberg et al.

CPC-EM Capsule

What do we already know about this clinical entity?

Emergency physicians rely on point-of-care echocardiography for rapid detection of critical diagnoses such as aortic aneurysms and dissections.

What is the major impact of the image(s)?

A hiatal hernia may be distinguished from an aortic aneurysm on ultrasound by the presence of microbubbles and a thick inner lining resembling stomach mucosa.

How might this improve emergency medicine practice?

By recognizing mimics of life-threatening conditions on ultrasound, emergency physicians can better expedite patient care and resource utilization.

Address for Correspondence: Sam Langberg, MD, Ochsner Medical Center, 1514 Jefferson Hwy, New Orleans, LA 70121. Email: samlangberg@gmail.com.

Conflicts of Interest: By the CPC-EM article submission agreement, all authors are required to disclose all affiliations, funding sources and financial or management relationships that could be perceived as potential sources of bias. The authors disclosed none.

Copyright: © 2017 Langberg et al. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) License. See: http://creativecommons.org/licenses/by/4.0/

REFERENCES


carbonated beverage, which will result in increased microbubbles and swirling echo densities. Other mass lesions seen adjacent to the DTA include left atrial myxomas or thrombosis, mediastinal hematomas or tumors, pericardial cysts and esophageal carcinoma.

In conclusion, a posterior anechoic mass seen on the PLAX view on POC echocardiography can be mistaken for a DTA aneurysm, but may be accurately diagnosed as a hiatal hernia if it has a thick inner lining resembling stomach mucosa and contains microbubbles.