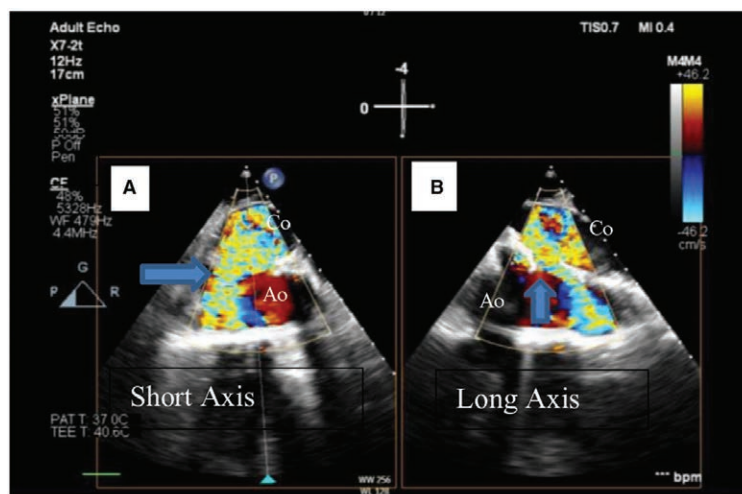
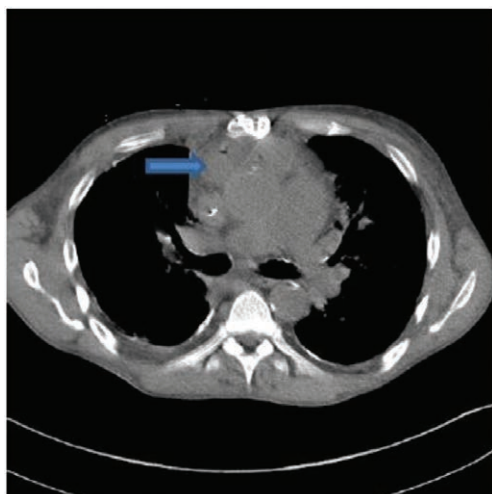


Transesophageal Echocardiogram to the Rescue in Diagnosing Ascending Aortic Pseudoaneurysm

Soojie Yu, M.D., Michael Fabbro II, D.O.



If life threatening hemodynamic instability occurs after induction of general anesthesia, it is a Category I indication for a perioperative transesophageal echocardiography (TEE) to rule out an acute pathology,¹ especially if there are no contraindications for TEE placement, there is a high suspicion of a cardiovascular cause, and if preoperative imaging is inconclusive.^{1,2} Rescue TEE is helpful in quickly diagnosing and directing resuscitation treatments.^{1,2} Most common TEE views obtained during rescue TEE are midesophageal four chamber, two chamber, long-axis view, aortic arch in short axis, and transgastric midpapillary view.² For past cardiac surgery patients, an ascending aortic pseudoaneurysm should be ruled out during TEE assessment, especially if the patient presented with an infection or after trauma.³ Ascending aortic pseudoaneurysm is a rare complication but a high index of suspicion should be raised because of high risk of morbidity and mortality with inadvertent rupture.³ Computed tomographic angiography is normally used to diagnose but if unsuspected, pseudoaneurysm can be mistaken as fluid collections on unenhanced computed tomography scans³ (left image, arrow). To assess for pseudoaneurysm, views of the midesophageal ascending aorta (Ao) in short (right image A) and long axis (right image B) should be obtained. Color flow Doppler would demonstrate aortic disruption and extravasation into a suprasternal collection (Co; right images A and B, arrows). For post-aortotomy patients,

additional views of the ascending aorta should be obtained to confirm whether postsurgical complications, like pseudoaneurysm, are the cause of instability as it could be instrumental in directing management.

Competing Interests

The authors declare no competing interests.

Correspondence

Address correspondence to Dr. Yu: sooj107@gmail.com

References

1. Memtsoudis S, Rosenberger P, Löffler M, Eltzschig H, Mizuguchi A, Shernan S, Fox J: The usefulness of transesophageal echocardiography during intraoperative cardiac arrest in noncardiac surgery. *Anesth Analg* 2006; 102:1653–7
2. Arce FD, Berrío-Valencia MI: Rescue transesophageal echocardiography: Approach and future. *Rev Colomb Anestesiol* 2017; 45:1–3
3. Chu LC, Cameron DE, Johnson PT, Fishman EK: MDCT evaluation of postoperative aortic root pseudoaneurysms: Imaging pearls and pitfalls. *AJR Am J Roentgenol* 2012; 199:W84–90

From the Jackson Memorial Hospital, University of Miami, Miami, Florida.

Copyright © 2019, the American Society of Anesthesiologists, Inc. All Rights Reserved. *Anesthesiology* 2020; 132:158. DOI: 10.1097/ALN.0000000000002976