

## IMAGES AND VIDEOS

# TOE imaging of a large aortic mass: an unusual cause of systemic embolization in a septic patient

Sarah R Blake, Jamal Khan and Adrian Chenzbraun

Royal Liverpool University Hospital, Liverpool, UK

Correspondence should be addressed to A Chenzbraun  
**Email**  
[Adrian.Chenzbraun@rlbuht.nhs.uk](mailto:Adrian.Chenzbraun@rlbuht.nhs.uk)

## Summary

A 72-year-old woman presented with sepsis and lower limb ischaemia. Transoesophageal echocardiography (TOE) for suspected endocarditis revealed no cardiac pathology or source of emboli but a large thrombus-like mass was noted in a normal-size descending aorta (Fig. 1A, Video 1). Repeat TOE after two weeks of anticoagulation showed two new masses and no change in the size of the original one (Fig. 1B). The patient died after bilateral leg amputation. There was no PM to provide pathology confirmation, but the most likely diagnosis was of a thrombus, possibly infected. Large aortic clots in a mildly diseased aorta are unusual and a rare cause of systemic embolization (1). TOE is considered the best imaging technique for aortic thrombi (2), and in this case, it clarified the correct diagnosis. A systematic TOE protocol (3) with assessment of all structures including descending aorta should be followed irrespective of the original indication. In the present case, a more focussed study might have missed the main pathology that was captured due to the thoroughness of the operator in completing the scan including all aortic views.

## Video 1

Largest thrombus in vertical plane. Note the soft, non-homogeneous echogenicity and the slight independent motion. View Video 1 at <http://movie-usa.glencoesoftware.com/video/10.1530/ERP-17-0006/video-1>.

## Declaration of interest

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of this article.

## Funding

This work did not receive any specific grant from any funding agency in the public, commercial, or not-for-profit sector.

## Patient consent

No consent was obtained (deceased patient).

## Author contribution statement

Dr Sarah R Blake summarised the clinical information and wrote the manuscript. Dr Jamal Khan performed the repeat TOE and reviewed the manuscript. Dr Adrian Chenzbraun performed the first TOE and revised the paper.

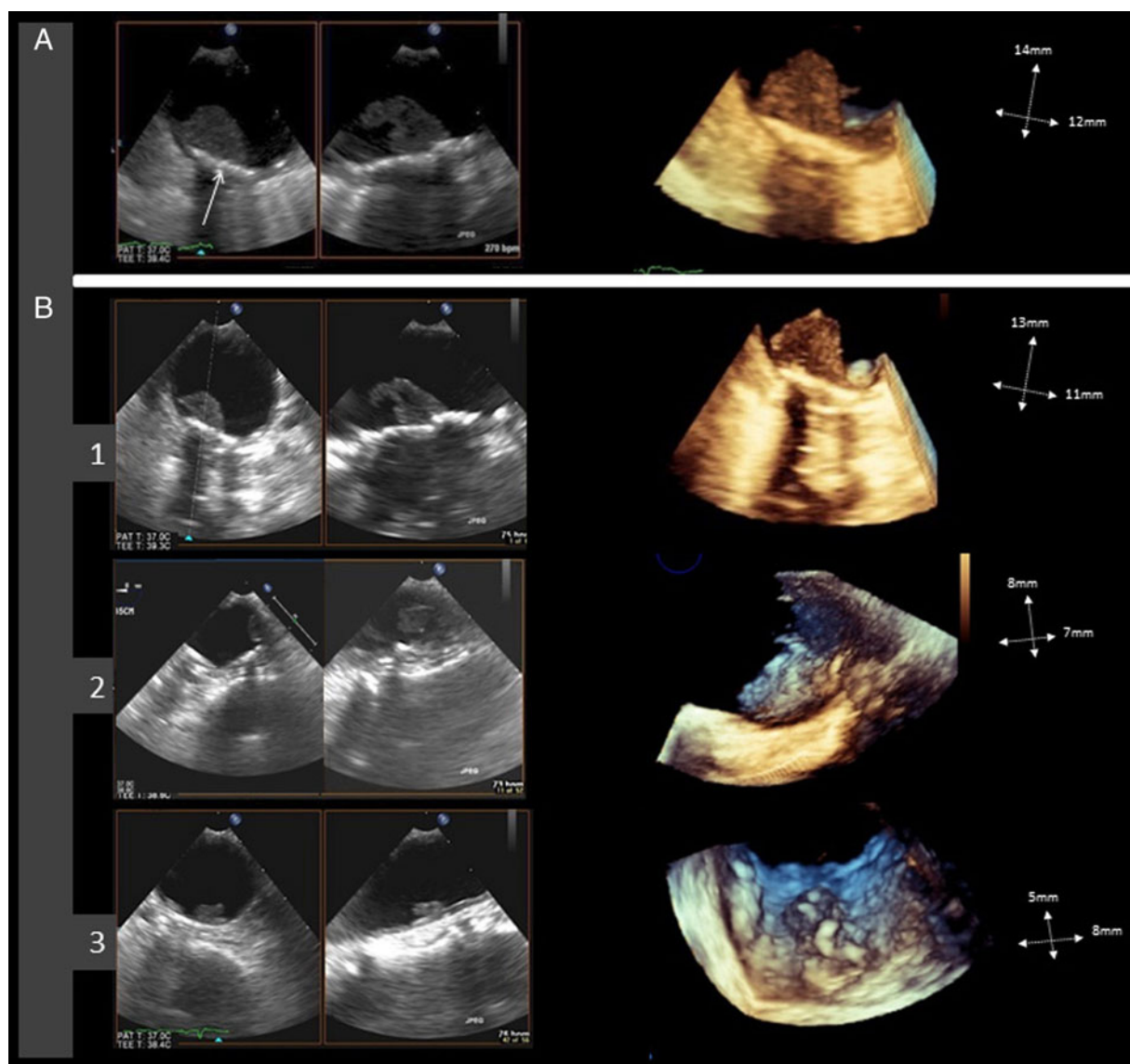
## References

- 1 Fayad ZY, Semaan E, Fahoum B, Briggs M, Tortolani A & D'Ayala M 2013 Aortic mural thrombus in the normal or minimally atherosclerotic aorta. *Annals of Vascular Surgery* **27** 282–290. (doi:10.1016/j.avsg.2012.03.011)
- 2 Evangelista A, Flachskampf FA, Erbel R, Antonini-Canterin F, Vlachopoulos C, Rocchi G, Sicari R, Nihoyannopoulos P, Zamorano J & European Association of Echocardiography *et al.* 2010 Echocardiography in aortic diseases: EAE recommendations for clinical practice. *European Journal of Echocardiography* **11** 645–658. (doi:10.1093/ejechocard/jeq056)
- 3 Wheeler R, Steeds R, Rana B, Wharton G, Smith N, Allen J, Chambers J, Jones R, Lloyd G, O'Gallagher K, *et al.* 2015 A minimum dataset for a standard transoesophageal echocardiogram: a guideline protocol from the british society of echocardiography. *Echo Research and Practice* **2** G29–G45. (doi:10.1530/ERP-15-0024)

Received in final form 22 March 2017

Accepted 23 March 2017

Accepted Preprint published online 23 March 2017



**Figure 1**

(A) First TOE: large thrombus at 30 cm depth overlying a calcific but uncomplicated plaque (arrow). (B) Repeat TOE: lack of regression of initial thrombus (1) and two new smaller thrombi at 35 cm (2) and 40 cm (3). Left panel: X-plane imaging; Right panel: 3D imaging.