

IMAGES IN EMERGENCY MEDICINE

Trauma

Man with trauma following motorcycle crash

Adi Osman MD¹  | Azma Haryaty Ahmad MB Bch BAO, MMed, AM¹ |
 Janice Lee Jiann Yiing MD¹ | Zulrushdi MD Yusof MB Bch BAO, MMed, AM²

¹ Department of Emergency and Trauma, Raja Permaisuri Bainun Hospital, Jalan Raja Ashman Jalan Hospital, Ipoh, Perak, Malaysia

² Department of Radiology, Raja Permaisuri Bainun Hospital, Jalan Raja Ashman Jalan Hospital, Ipoh, Perak, Malaysia

Correspondence

Adi Osman, MD, Department of Emergency and Trauma, Raja Permaisuri Bainun Hospital, Jalan Raja Ashman Jalan Hospital, 30400, Ipoh, Perak, Malaysia.

Email: osman.adi@gmail.com

1 | PATIENT PRESENTATION

A 56-year-old male presented to the emergency department (ED) following a frontal impact motorcycle accident. The patient was pale

with persistent hypotension, tachypnea, and tachycardia along with bilateral lower limbs paralysis and a complete loss of sphincter functions. Patient was intubated, and transesophageal echocardiography performed by attending emergency physician at ED critical care bay

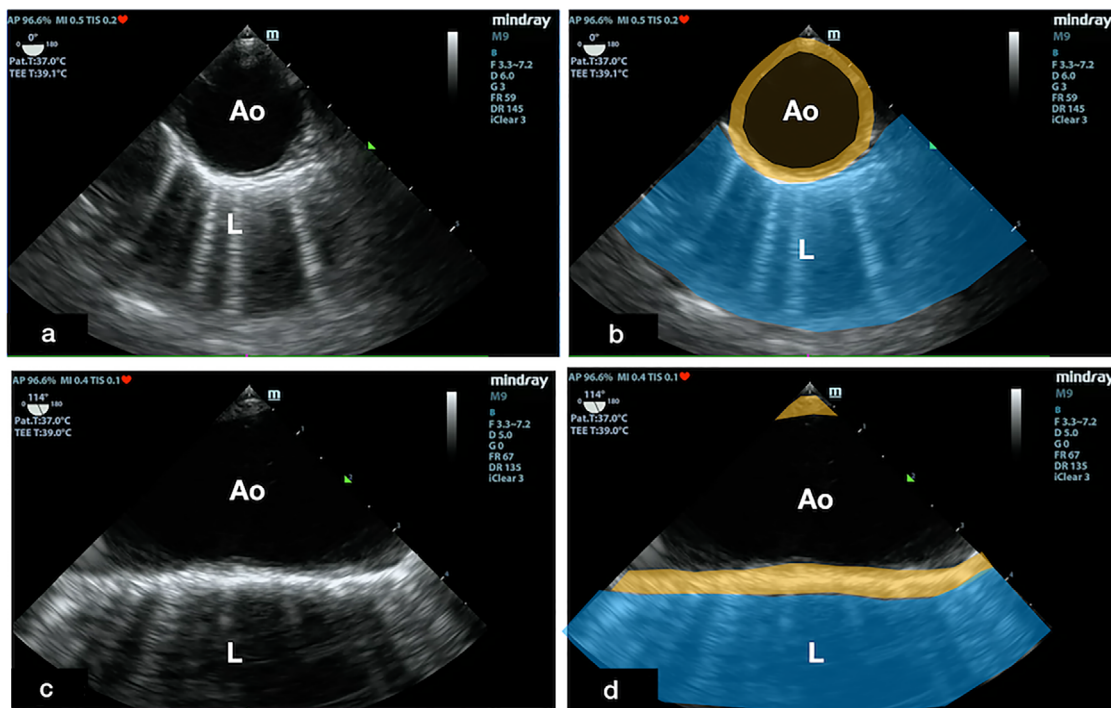


FIGURE 1 (a and b) Mid-esophageal descending aorta short-axis (SAX) by multiplane transesophageal echocardiogram showed the transverse view of normal descending aorta with well-defined aortic wall (yellow watermark). (c and d) Mid-esophageal descending aorta long-axis (LAX) showed the longitudinal view of normal descending aorta in relation to lung (blue watermark). Ao, descending aorta; L, lung

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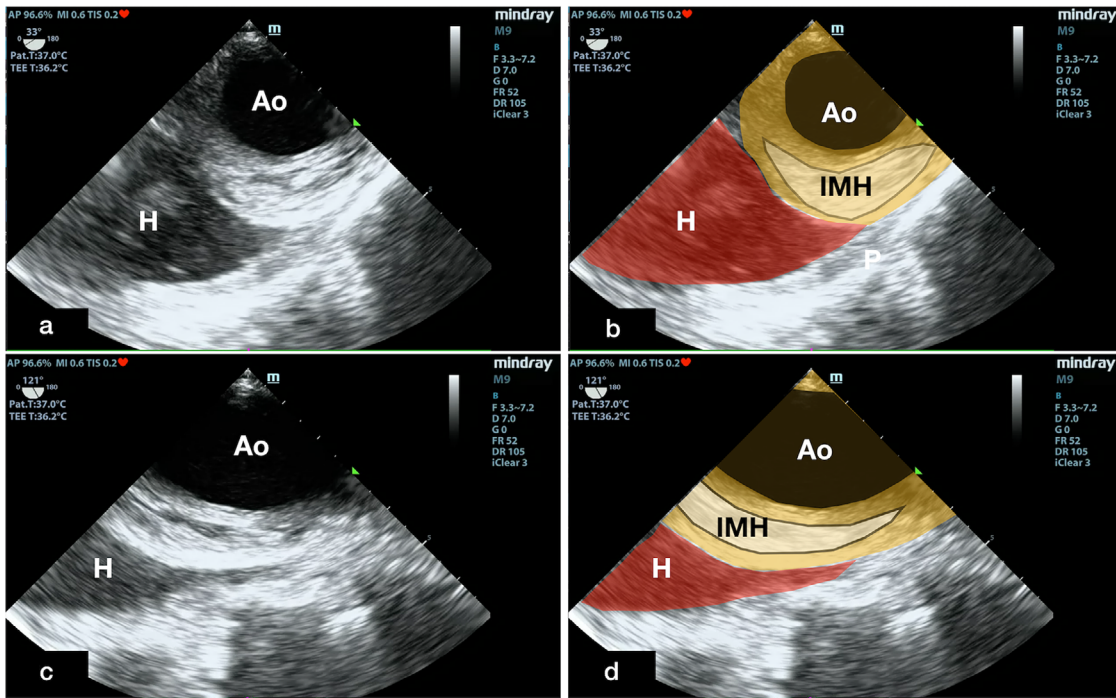
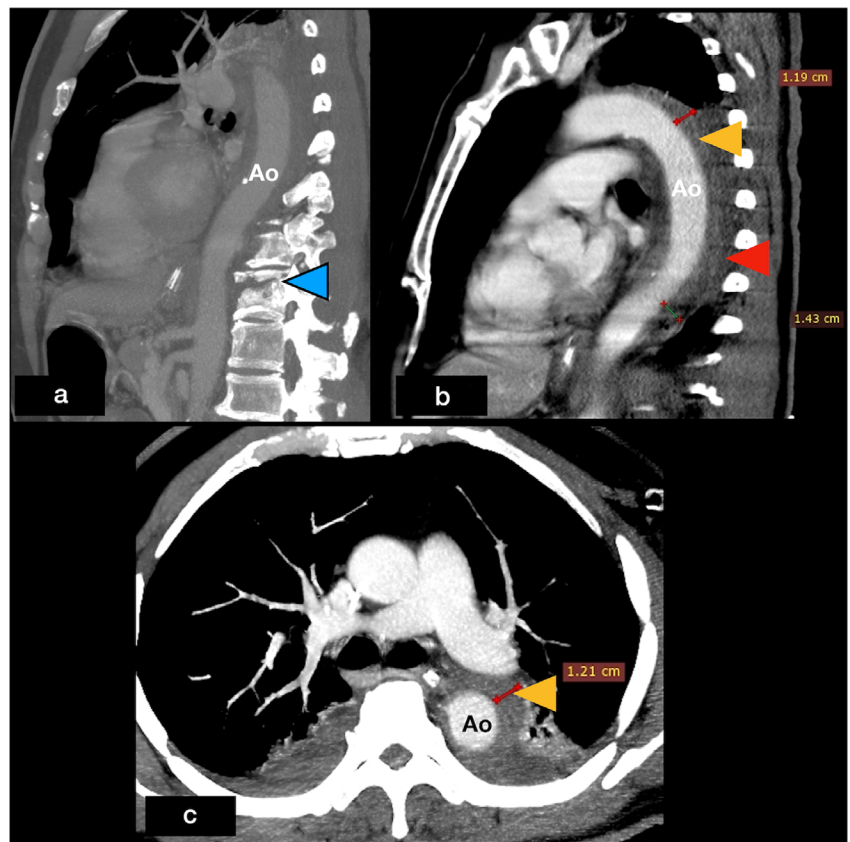


FIGURE 2 (a and b) Mid-esophageal descending aorta short-axis (SAX) by multiplane transesophageal echocardiogram showed the transverse view of the descending aorta with hypochoic, well-defined, crescent-shaped thickening of anterior aortic wall suggestive of intramural hematoma (yellow watermark). (c and d) Mid-esophageal descending aorta long-axis (LAX) by multiplane TEE showed the longitudinal view of the descending aorta, hemothorax (red watermark) and intramural hematoma. Ao, descending aorta; H, hemothorax; IMH, intramural hematoma

FIGURE 3 Computed tomography (CT) showed (a) fracture T11 vertebra (blue arrow head), (b) intramural hematoma (yellow arrow head), and (c) peri-aortic hematoma (red arrow head). Ao, aorta



showed the transverse and longitudinal view of the descending aorta with hypoechoic, well-defined, crescent-shaped thickening of anterior aortic wall suggestive of intramural hematoma (Figures 1,2; Supporting Information Videos S1 and S2). Computed tomography (CT) showed fracture T11 vertebra, intramural hematoma, and peri-aortic hematoma along the arch of the aorta extending down to upper abdominal aorta at the level of T12 (Figure 3).

2 | DIAGNOSIS

2.1 | Fracture T11 vertebra associated with blunt traumatic aortic injury

Traumatic thoracolumbar spine fracture with a concomitant blunt aortic injury is uncommon (1.4%) but potentially fatal.¹ Most fractures associated with blunt traumatic aortic injury occurred at the level of T11–L2 vertebra (62%).¹ ED transesophageal echocardiography is a potential new imaging adjunct in resuscitation.^{2–4} Even though the surface ultrasound has become an important bedside imaging tool in initial management of trauma patients in ED, its limitations include poor evaluation of vascular pathologies (ie, BTAI).⁵ The role of ED transesophageal echocardiography for the early detection of BTAI in hemodynamically unstable trauma patient was reported by Osman et al.⁶ The patient was managed conservatively and was discharged from spinal intensive care unit after day 10.

ORCID

Adi Osman MD  <https://orcid.org/0000-0003-4932-8907>

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SUPPORTING INFORMATION

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

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