

An Uncommon Thoracic Aortic Rupture after an Uncommon Motorcycle Accident with a Deer

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A 46-year-old male presented to our Trauma Center with a blunt thoracic aortic injury after a motor vehicle crash with a deer. At presentation in the emergency room, he scored 9 on the Glasgow Coma Scale and was hypotensive with a peripheral oxygen saturation of 85% at room air. Once his blood pressure was stable, he underwent full-body, triphase computed tomography angiography (CTA), which showed: a mediastinal hematoma with a posterior descending aortic pseudoaneurysm (PDAP) distal to the aortic isthmus in the presence of bovine aortic arch; bilateral pulmonary contusions; third-cervical body fracture; LeFort type-II, left facial fracture; and multiple bilateral rib and sternal fractures (Figure 1a,b).

Under general anesthesia, a percutaneous 5-Fr right common femoral artery and a 5-Fr left brachial artery sheath were managed. Via the brachial access, a pigtail was placed in the aortic arch and subtraction angiography confirmed the PDAP. Subsequently, through the femoral access, a thoracic endovascular aortic repair procedure was managed. Final subtraction angiography demonstrated successful exclusion of the PDAP (Figure 2a,b). A 1-year follow-up CTA was done with a stable

aortic arch stent, and the pseudoaneurysm was no longer evident (Figure 3a,b).

Ethics Statement

- (1) All the authors mentioned in the manuscript have agreed to authorship, read and approved the manuscript, and given consent for submission and subsequent publication of the manuscript.
- (2) The authors declare that they have read and abided by the JEVTM statement of ethical standards including rules of informed consent and ethical committee approval as stated in the article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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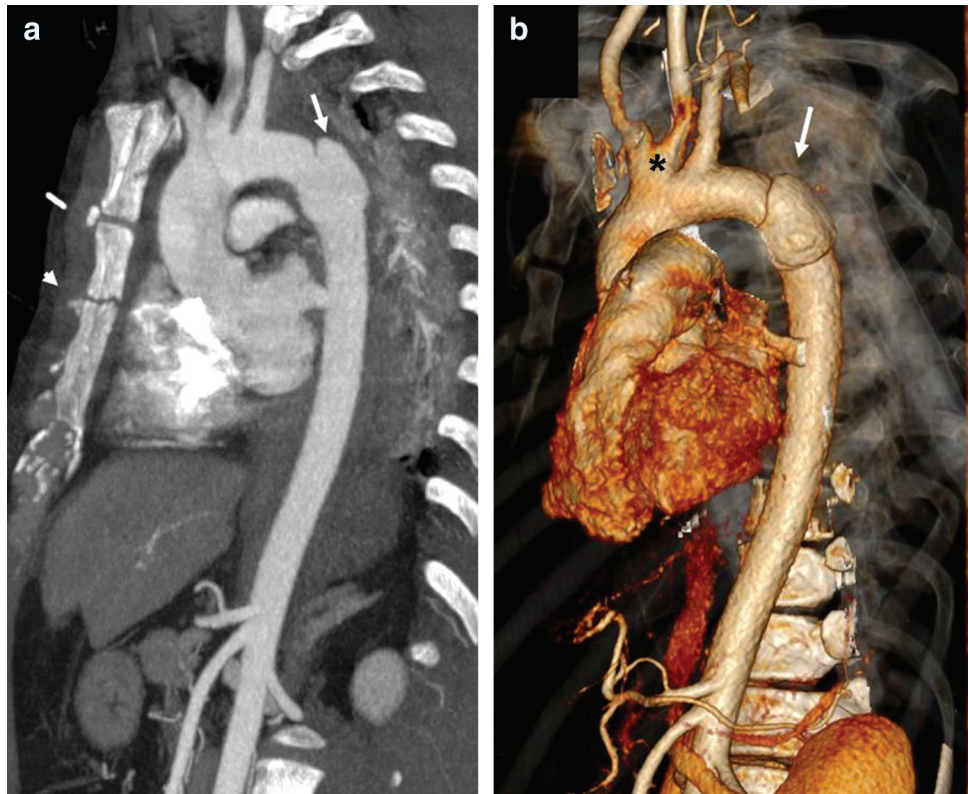


Figure 1 (a) Parasagittal maximum intensity projection (MIP) shows the presence of a posterior descending aortic pseudoaneurysm (PDAP) distal to the aortic isthmus (white arrow). Multifocal sternal fractures are indicated by white arrowheads. (b) CT 3DVR highlights the PDAP (white arrow) and bovine aortic arch (asterisk).

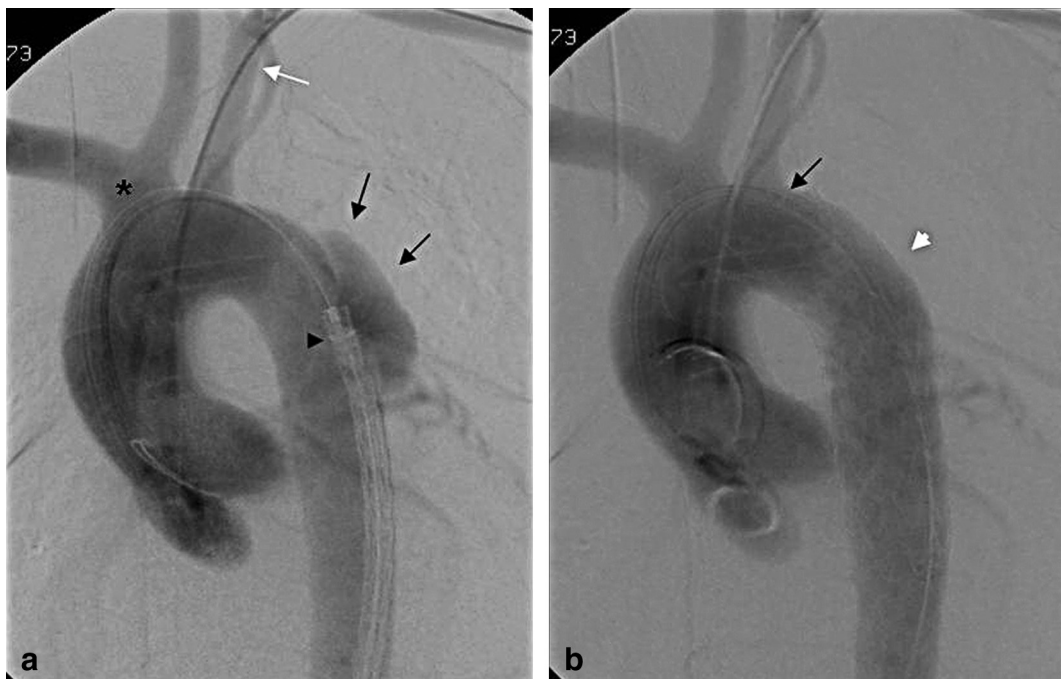


Figure 2 (a) Digital subtraction angiography (DSA) of thoracic aorta shows the back-sided large post-traumatic pseudoaneurysm (black arrows). The first DSA control was performed using a 5-Fr pigtail catheter inserted via the left subclavian artery (white arrow) with an aortic endograft already in the thoracic aorta to avoid an extra DSA control. The image confirms the presence of bovine aortic arch (asterisk). Use of left brachial access worked as an anatomical marker to be as aggressive as possible for the proximal landing zone. (b) DSA demonstrates successful exclusion of PDAP (white head arrow) with regular patency of left subclavian artery (black arrow).

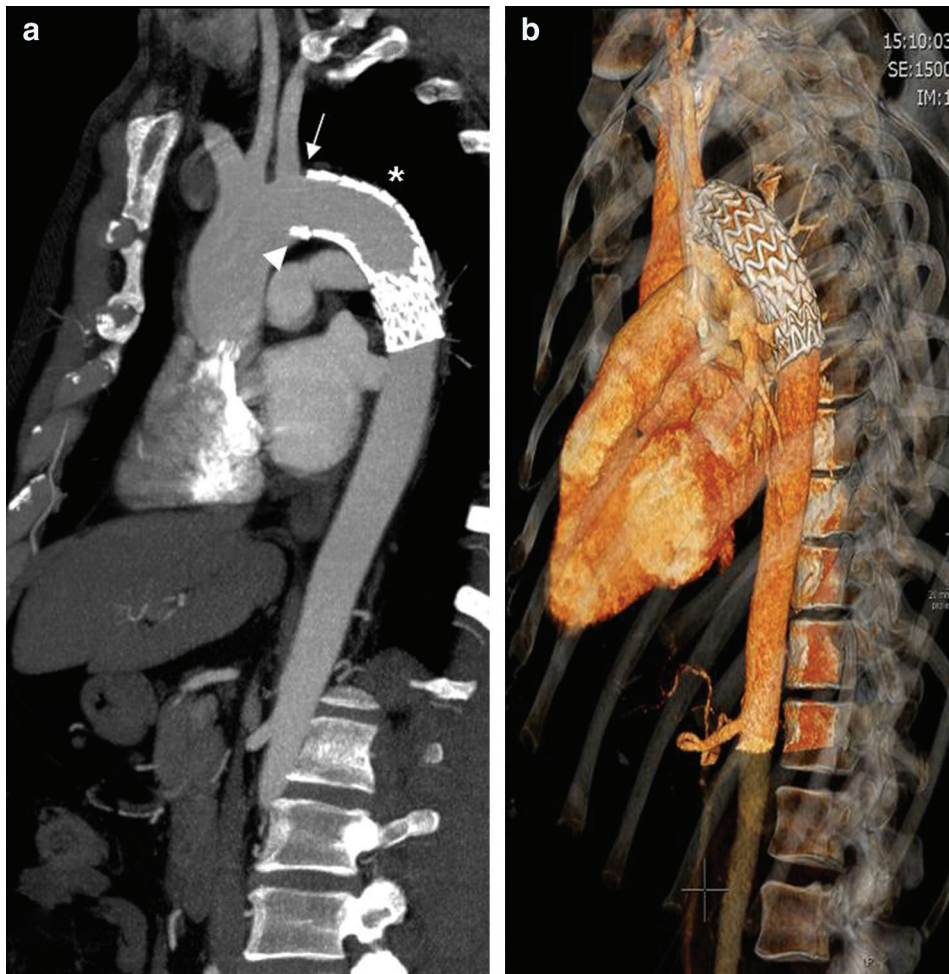


Figure 3 (a) Parasagittal MIP shows the exclusion of posterior descending aortic pseudoaneurysm (PDAP) with the correct positioning of the endograft (asterisk). The image demonstrates the graft at the ostium of the left subclavian artery (white arrow) with minimum “bird beak sign” (white arrowhead). **(b)** CT 3DVR highlights the endograft treating the PDAP.