Radiology Case Report

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HPI

- 32 y.o. male that presented to the ED as a full trauma. Injury occurred during MVC with rollover, patient found to be intoxicated. Endorses injecting heroin earlier today. Does not remember the event.
Aortic Transection

- An **aortic transection** (also known as a traumatic aortic rupture) is a type of traumatic aortic injury. It is considered the second most common cause of death associated with motor vehicle accidents.

- It occurs from a near-complete tear through "all the layers" of the aorta due to trauma (e.g. motor vehicle collision or a severe fall).
Aortic Transection

- It tends to most commonly occur in the **proximal descending aorta**, near where the left subclavian artery branches off from the aorta. Tethering of the aorta by the **ligamentum arteriosum** makes the site prone to shearing forces such as those occurring in a sudden acceleration or deceleration event.
Aortic Dissection

- **Aortic dissection** occurs when blood enters the medial layer of the aortic wall through a tear or penetrating ulcer in the intima and tracks along the media, forming a second blood-filled channel within the wall.

Stanford type A

Stanford type B
Differential Diagnosis – Widened Mediastinum

Vascular anomalies
- unfolded aorta
- double SVC
- aberrant right subclavian artery
- azygous continuation of the IVC

Lung atelectasis

Mediastinal lymphadenopathy

Enlarged pulmonary arteries

Technical factors (on chest x-ray)
- rotation
- poor inspiration
- supine position
- lordotic position

Mediastinal large B cell lymphoma

Thymoma
Graft Repair of Aortic Transection
References

- https://radiopaedia.org/articles/aortic-dissection
- https://radiopaedia.org/articles/aortic-transection
- https://www.google.com/search?q=aortic+transection&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiYluyV2-DdAhWJY98KHU3KCscQ_AUIDigB#imgrc=pHy56XoXME5WzM: