CASE REPORT

Splitting at the seams: Extensive Stanford Type A aortic dissection

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ABSTRACT

We present a rare case of extensive Stanford Type A aortic dissection extending from the ascending aorta superiorly to the carotids and inferiorly to the infra-renal abdominal aorta. A 34-year-old male with history of hypertension and tobacco use presents with chest pain, dyspnoea, slurred speech and altered mental status. Chest radiograph showed no mediastinal widening. CT head showed multiple sub-cortical infarcts and CT chest showed mild dilation of the thoracic aorta but no dissection. He subsequently reported bilateral lower extremity numbness and weakness and was intubated for hypoxic respiratory failure. A CT scan of the chest showed extensive Type A aortic dissection. He underwent emergent surgical intervention but due to the extensive dissection and blood loss, he ultimately expired.

DISSUSSION

Extensive Stanford Type A aortic dissection extending proximally to the carotids and distally to the infra-renal abdominal aorta is exceedingly rare, especially in a relatively young and healthy male. Most aortic dissections occur in males with chronic hypertension in the seventh decade. Our patient had a history of chronic hypertension and tobacco abuse; however, he was negative for connective tissue disease, vasculitis, trauma, illicit drugs or previous aortic surgical interventions.

Classic aortic dissection typically presents with a “tearing chest pain that radiates to the back”; however, aortic dissection can function, diastolic dysfunction and moderate aortic regurgitation. He was started on a nitroglycerin drip for the hypertensive emergency and furosemide for the pulmonary oedema. He subsequently developed slurred speech, lower extremity weakness and was intubated for hypoxic respiratory failure. A CT scan of the chest showed extensive Type A aortic dissection. He underwent emergent surgical intervention but due to the extensive dissection and blood loss, he ultimately expired.
FIGURE 1: Sagittal view showing extensive Type A aortic dissection extending inferiorly to the infrarenal abdominal aorta.

FIGURE 2: Coronal view showing extensive Type A aortic dissection extending superiorly to the right common carotid artery.
be incredibly easy to miss.\(^{(2)}\) Our patient initially presented with acute chest pain and dyspnoea. Initial chest radiograph was not suggestive of mediastinal widening, and CT imaging of the chest showed ascending thoracic aorta dilation without dissection. It was not until findings of stroke-like symptoms of slurred speech, lower extremity weakness, and respiratory failure prompted a second CT chest, abdomen, and pelvis that an extensive dissection showed. The patient’s age, atypical presentation, and initial imaging showing dilation but not dissection led to a delay in diagnosis and subsequent treatment. Type A dissections have a mortality rate of 2% per hour which necessitates immediate repair.\(^{(1)}\)

In addition to demonstrating the importance of recognising aortic dissection, this case also demonstrates the importance of the new 2017 ACC/AHA Hypertension Guidelines.\(^{(3)}\) Our patient was classified as pre-hypertensive and was not treated on antihypertensive medications. However, the new guidelines would place the patient in Stage 1 hypertension which would have prompted treatment.\(^{(3)}\) This patient demonstrates the importance of controlling hypertension in healthy patients.

Conflict of interest: none declared.

REFERENCES