Medical Image of the Week: Atherosclerotic Aneurysm of Aortic Arch and Descending Thoracic Aorta

Figure 1. Chest radiograph displays mild CHF, prominent vascular markings, and a large thoracic aneurysm.

Figure 2. Panel A: Computerized tomography angiography (CTA) with contrast displays an aneurysm of the aortic measuring 6.8 cm with eccentric thrombi. Panel B: CTA also shows an aneurysm of the descending aorta measuring 6 cm across with eccentric thrombi. Panel C: CTA demonstrates a tortuous descending aorta displayed by the curving of the descending aorta as it transitions to the abdominal aorta.
A 94-year-old Spanish-speaking woman presented to the hospital with intermittent episodes of dyspnea and abdominal pain for one week. Her past medical history was notable for 30 pack-year smoking history and hypertension, which was reportedly controlled with medical therapy. Physical exam showed trace peripheral edema bilaterally, intact peripheral pulses, and a mild abdominal bruit. Work up at the emergency department revealed a non-ST elevation myocardial infarction with troponin T of 0.34 ng/mL but no ST-wave abnormality on electrocardiography. Chest x-ray displayed an incidental thoracic aneurysm (Figure 1). Chest computed tomography with contrast demonstrated a continuous aneurysm of the aortic arch and descending thoracic aorta with diameters measuring 6.8 cm and 6 cm, respectively (Figure 2A and 2B). Eccentric thrombi are noted in the aortic arch and the descending aorta. Interestingly, the distal descending thoracic aorta curves as it transitions to the abdominal aorta, which is evidence of a tortuous descending aorta (Figure 2C). The patient declined both invasive and non-invasive treatment and left the hospital against medical advice one day after admission.

Melvin Parasram MS¹, Lea McKinnon MD², Iwan Nyotowidjojo MD³, and Kareem Ahmad MD⁴

¹Midwestern University: Arizona College of Osteopathic Medicine, Glendale, AZ USA
²Departments of Radiology, ³Internal Medicine and ⁴Pulmonary and Critical Care
Banner University Medical Center - Tucson, Tucson, AZ USA