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Case Study: Type B Aortic Dissection in a Petitioned Patient (SI)

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“Not Just Another Psychiatric Evaluation”

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Objective

To describe a case of aortic dissection with an atypical presentation

Introduction

- Aortic dissection occurs after a tear in the intima which allows blood to enter the media and dissect between the intimal and adventitial layers, creating a false lumen which may extend anterograde or retrograde
- Incidence: 2.6-3.5 per 100,000 person, bimodal age distribution
- Risk factors: long-term HTN or connective tissue disorders (most common), preexisting aneurysm, bicuspid aortic valve, aortic coarctation, cocaine use
- Classic presentation: tearing/ripping sensation, severe pain, pulse deficit, aortic regurgitation, tamponade
- Type A: ascending aorta – surgical tx
- Type B: descending aorta – medical tx
- Diagnosis: CT with contrast
- Treatment: reduce RATE first, then lower BP - Esmolol or Labetalol, Nitroprusside

Patient Information

- 67 y/o F with **PMHx** of HTN, HLD, scoliosis of thoracic spine, allergic rhinitis, chronic low back pain, and generalized anxiety disorder presented to the emergency department by **EMS** with a **CC** **psychiatric evaluation** and **cough** x3 weeks, non-productive, constant, gradually worsening, no exacerbating or alleviating factors, no prior history of similar
- Per EMS, family contacted 911 due to patient expressing **suicidal ideation**, specifically, “cutting herself with a knife”, admitted to recent stressors with her marriage and domestic violence
- Patient was actually **petitioned** by a sheriff’s deputy
- To patient’s knowledge, 911 contacted because of inc frequency of cough
- She admits to depression but denied suicidal ideation
- No surgical hx, respective home medications to PMHx, daily smoker, no alcohol or drug abuse, no family history
- On **ROS**, admits general malaise and weakness, ongoing x2 weeks. Also admits to associated sx of rhinorrhea, SOB, sore throat, and wheezing. Denies f/c, diaphoresis, HA, lightheadedness, dizziness, myalgias, rash, chest tightness, palpitations, abd pain, n/v/d

Objective

- Vital Signs: pulse 68, resp 18, Ht 4’10”, Wt 59 kg, SpO2 98%, BP 159/74
- Physical: alert, NAD, HEENT unremarkable, RRR, +systolic murmur, distal pulses 2+, no respiratory distress, +wheezes scattered bilaterally, abdomen soft, non-tender, neuro grossly unremarkable, no pallor or diaphoresis

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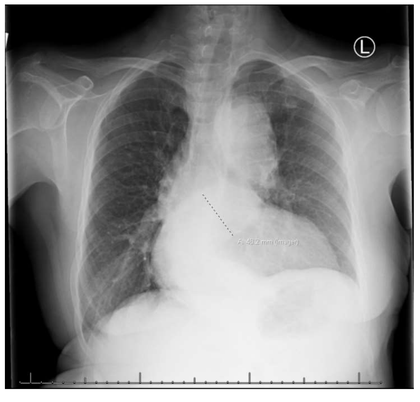
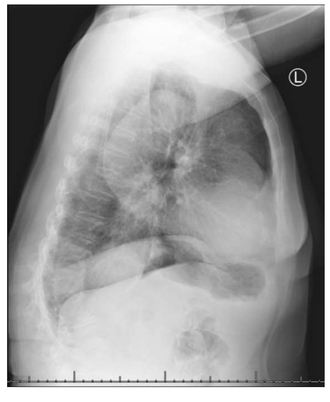
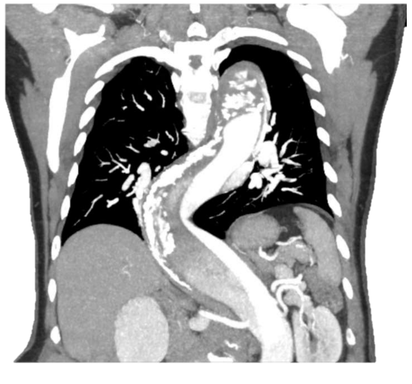
Diagnostic Assessment

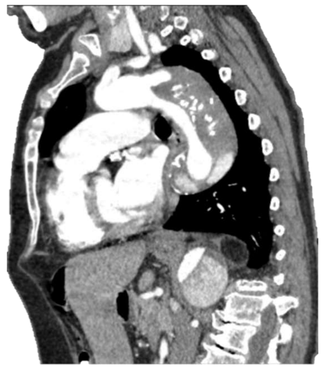
- Initial workup: Basic labs, CXR, and Influenza
- Chest X-ray: ”Impression: no acute cardiopulmonary process. **Tortuous and mildly aneurysmal appearance of the thoracic aorta**”
- Additional studies: coags and troponin WNL
- EKG: NSR rate of 70, no ST or T wave changes
- CT chest dissection w/ and w/o, abdomen, pelvis w/ IV contrast: ”Impression: **Aneurysmal dilatation of the thoracic and abdominal aorta with type B dissection commencing just distal to the origin of the left subclavian artery**. Defect and/or contained rupture at the superior aspect of the thoracic arch at the beginning of the dissection measures approximately 9 mm at the neck and extends into the dissection flap by approximately 2.5 cm. The thoracic descending aorta measures up to 4.4 cm in diameter. There is a large amount of acute on subacute appearing thrombus within the false lumen. The false lumen occupies approximately 66% of the lumen of the descending aorta. This increases to approximately 90% just proximal to the diaphragm. There is extension of the dissection into the abdominal aorta to what appears to be the left common iliac artery. Findings at this level are limited by poor contrast opacification. There appears to be aneurysmal dilatation of the left common iliac artery measuring up to 3.0 cm. The celiac artery, SMA and bilateral renal arteries are patent and arise off the true lumen. The false lumen occupies 75% of the cross-sectional area of the infrarenal abdominal aorta. There appears to be aneurysmal dilatation of the right internal iliac artery measuring approximately 2.5 cm in diameter.”

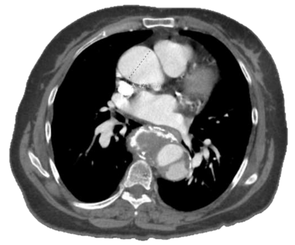
Images

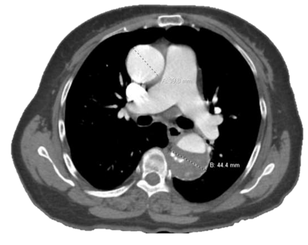


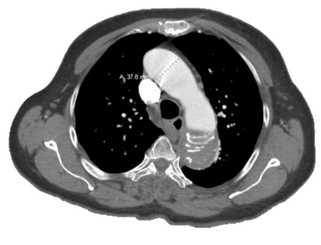


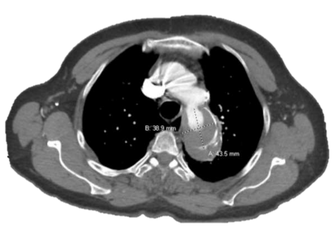


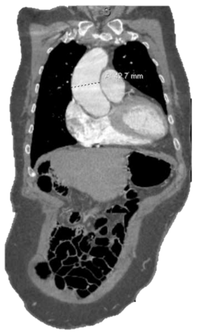


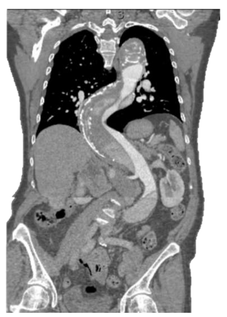


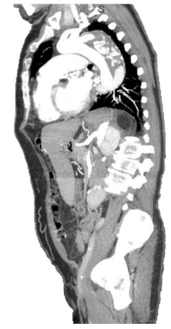


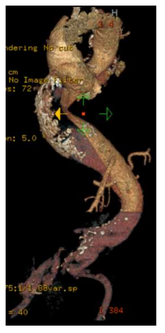












Therapeutic Interventions

- Esmolol initiated, SBP goal 100-110, HR 60-70
- Case discussed with thoracic and vascular surgery
- Transferred to tertiary care facility for potential surgical intervention given that the dissection originated from thoracic aortic aneurysm
- Per EMR, monitored several days for blood pressure control and psych evaluation. No indications for surgical intervention, discharged home with repeat CTA ordered in 6 wks.

Discussion

- Aortic dissection is uncommon and can present in unusual ways
- Type B dissections with adequate perfusion may be difficult to detect
- Thorough history and physical should guide appropriate management
- Aneurysms are a risk factor for dissection
- Symptoms of a thoracic aneurysm may include wheezing, coughing, or shortness of breath as a result of pressure on the trachea

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