Symptomatic Abdominal Aortic Aneurysm

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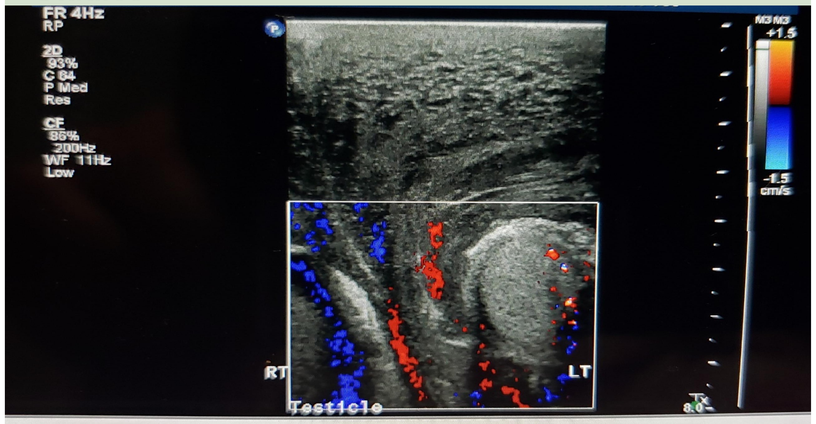
Learning Objectives

- Describe case of large abdominal aortic aneurysm (AAA).
- Identify patients with AAA.
- Review management of AAA.

Introduction

- Abdominal aortic aneurysm (AAA) is defined as abdominal aorta with a diameter greater than 3.0 cm.
- AAA rupture is responsible for 11,000 deaths per year and 4-5% of sudden deaths in the United States.
- The incidence is 5-7% in individuals over 60 y.o. and accounts for 75% of aneurysms; tenth leading cause of death in individuals aged 65 to 74 y.o.; Men between 74 to 84 y.o. incidence is 12.5% and women in the same age bracket incidence is 5.2%.
- AAA is a result of collagen and elastin degradation within the aorta wall.
- Etiologies include aortic dissection, mycotic infection, Ehlers-Danlos Syndrome, and association with atherosclerosis in 25% of patients.
- Risk factors include hypertension (HTN), peripheral vascular disease, inflammation from tobacco abuse, coronary artery disease including prior myocardial infarction, male gender, first degree relative with 19% risk, and age over 65.
- Rupture risk increases with tobacco abuse, female gender, obstructive lung disease, HTN

Studies



Ultrasound ruled out testicular torsion; showed good blood flow

Case Presentation

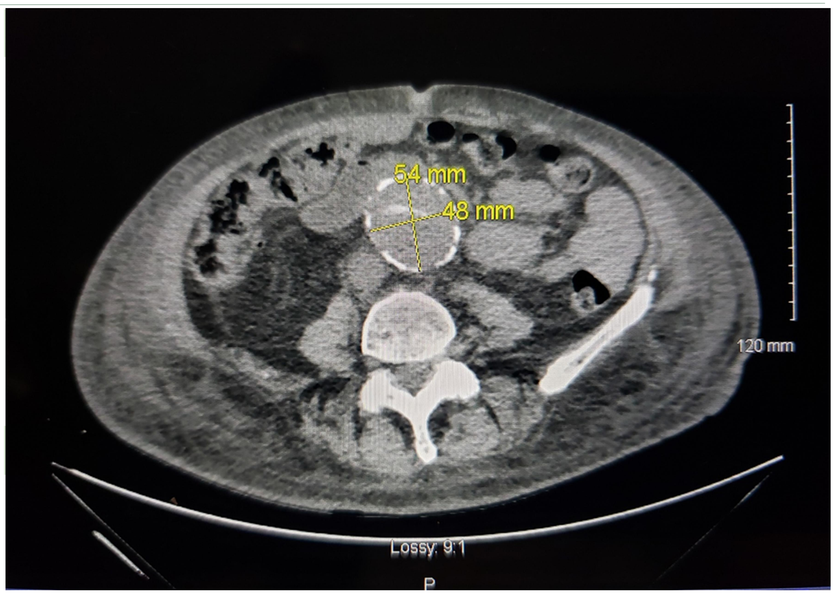
- Patient is a 75-y.o. male, PMH of COPD, heart murmur, chronic kidney disease, prostate cancer, and chronic cellulitis in the lower extremities, presented to the ED complaining of testicular swelling, abdominal and groin pain for 2 days.
- Although patient has home nurse 3 times a week for his chronic cellulitis, his lower extremity edema has gotten worse over the past few days.
- Edema had extended starting from his foot to leg to thigh and now testicles, which is very uncomfortable when he walks.
- Patient denies fever, weakness, AMS, burning or pain with urination, history of UTI, STI, GU issue, or intestinal herniation.

Focused Physical Exam
Initial VS: BP 127/5, HR 69, RR 18, Temp 36.9C, 94%RA
General – A&O X3, irritate, mild distress
Respiratory – CTA, reduced lung sounds, no wheezes
CV – RRR, murmur, no crackles
GI - Bowel Sounds within normal limits, pulsating abdominal aorta.
GU – groin pain, erythema, swollen testicles and genital. No ulcer, rash, or discharge. Negative cremasteric reflex.
Musculoskeletal - anasarca, lower extremities erythema and edema. Fluid is seeping out of right lower leg and foot.

Labs: CBC, CMP, UA are unremarkable.

Imaging study: CT abdomen revealed 5.4 cm AAA. No leakage or rupture. Ultrasound ruled out testicular torsion, showed good blood flow.

Disposition: Patient admitted for immediate surgical repair.



CT abdomen revealed 5.4 cm AAA

Discussion

- Our patient had classic risk factors for AAA. (elderly, Caucasian, male, tobacco use)
- Had a AAA measuring 5.4 cm, close enough for surgery.
- He presented with groin pain, symptomatic of AAA which meets the criteria for surgery.

AAA Management, Criteria for Surgery:

- Symptomatic AAA include abdominal back or groin pain requiring immediate surgery.
- Surgical repair for asymptomatic aortic aneurysm ≥5.5 cm.
- Have a low threshold for AAA evaluation in patients with risk factors.
- Patient presenting with groin pain and history of risk factors require careful evaluation including CT abdominal scan.
- A delay in diagnosis of AAA related symptoms result in a very high mortality.
- ED physicians must have a low threshold for ultrasound in patients age greater than 50 to 60 years old presenting with abdominal or back pain.

References

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