Total Eclipse of the Heart

AAES/AACE Interesting Case Presentation
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Nothing to Disclose

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ER Presentation

- 35 y/o healthy male
- Complaints
  - Chest pain
  - Shortness of breath
  - Abdominal tightness
  - Diaphoresis
- Vitals
  - Temp 97.5
  - HR 106
  - BP 184/119 (140)
  - RR 22, 90%
  - BMI 28.6

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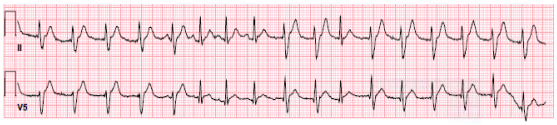
Evaluation

- EKG – ST segment elevation, possible acute anterior infarct



- Laboratory
  - Troponin 1.060 (<0.010)
  - WBC 14.5
  - Glucose 505
  - Creatinine 1.81, GFR 43

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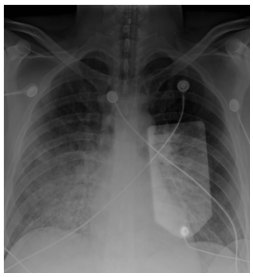
Further Evaluation

- Oxygen saturation worsens
  - 80% non-rebreather – Intubated
- Cardiology consulted
- Bedside echocardiogram
  - Ejection fraction 10-15%
- Emergent cardiac catheterization
  - Normal
- Blood pressure becomes labile



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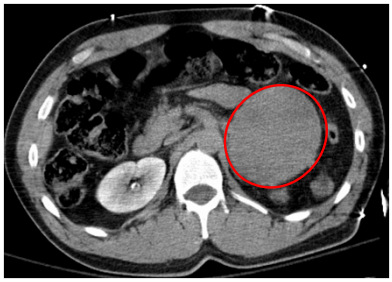
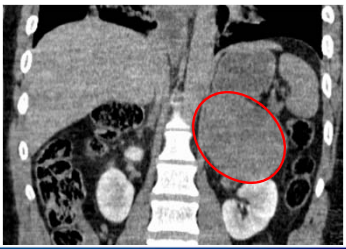
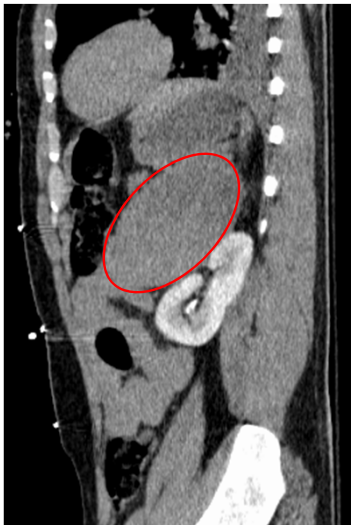
Adrenergic Crisis Due to Pheochromocytoma

Non-contrasted CT







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Clinical picture worsens

- Concern for organ failure due to low average mean arterial pressure (MAP)
- Extracorporeal membrane oxygenation (ECMO) initiated
- Endocrine Surgery consulted while undergoing ECMO cannulation
  - Initiate phenoxybenzamine via NG tube
- MAP oscillated between 40s to 140s every 2 to 3 minutes overnight

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Treatment Dilemma

- Cardiology desired urgent adrenalectomy on ECMO due to concerns of complications related to prolonged ECMO cannulation
- Endocrine Surgery recommended continued blockade, with surgery once completely blocked and weaned from ECMO

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Multidisciplinary Meeting

- Cardiology, Endocrine Surgery, Endocrinology, Urology, Anesthesia, ECMO team members
- Compromise
  - Continue phenoxybenzamine
  - Initiate 4-day blockade with IV metyrosine
  - Adrenalectomy on blockade/ECMO day 6

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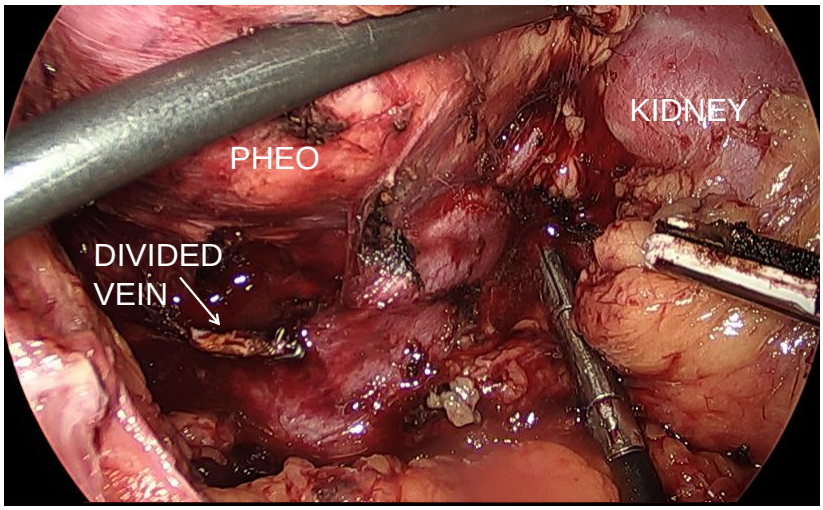
Left laparoscopic adrenalectomy



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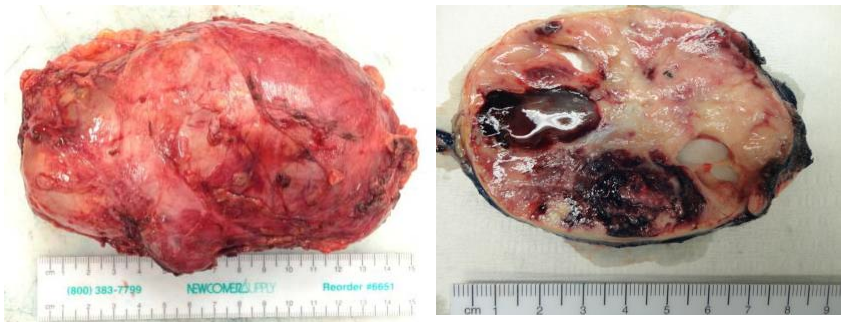
Specimen & Pathology



- 12.8 cm (402g) pheochromocytoma with lymphvascular invasion, margins clear

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Postoperatively

- Decannulated successfully in OR
- Discharged a week later
- Metanephrines normal at 2 wk follow up
- In retrospect
  - Years of sweating and “episodes”
  - No known history of hypertension
  - Brother with prolactinoma
- Genetic testing normal
  - Including RET, MEN, VHL, NF1, MAX, SDHA/AF2/B/C/D, TMEM127

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DISCUSSION

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Key Teaching Points

- Adrenergic crisis must be recognized as a rare cause of unexplained HTN
- Pheochromocytomas must be blocked preoperatively, even in an acute setting
- A multidisciplinary approach is ideal for complex clinical scenarios



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