Anchors Aweigh! Catecholamine Surge Disguised as Postpartum Anxiety

Sarah Larsen MD, Bart Moulton MD, Melissa Nyendak MD
Oregon Health & Science University and VA Portland Health Care System

Introduction

Pheochromocytomas are rare tumors which can lead to serious cardiac complications from catecholamine secretion including hypertensive crisis, myocardial infarction, heart failure, cardiogenic shock, and death.

Many medications can precipitate a hypertensive crisis:

- Steroids
- Non-selective beta blockers
- Antidepressants
- Glucagon

These medications are often use to treat conditions which pheochromocytomas may mimic – such as panic disorder and migraines.

Cognitive bias can lead to delayed diagnosis, which increases risk of complications.

Patient Presentation

HPI:

32 year old female G4P4, 5 weeks post partum, presenting with episodes of chest pain, panicked feeling, and headaches which started during pregnancy and are now worsening – initially diagnosed as panic attacks and migraines , was started on SSRI. Had a few elevated pressures during pregnancy, but didn't meet criteria for pre-eclampsia. Vital signs in emergency department notable for BP of 170/110 and pulse of 110. Physical exam otherwise unremarkable. Labs notable for hypokalemia, AKI, and leukocytosis with WBC of 23.2

137	102	16	434
2.5	19	1.38	

Emergency Department Course:

Initially diagnosed as migraine and treated with steroids, ketorolac, and IV fluids. Plan was to discharge home with potassium supplementation, however had episode of hypotension with SBP in 50s which improved with fluids. EKG showed ST depression in lateral leads. Troponin was elevated to 0.92. Patient was admitted to general ward with cardiology consult.

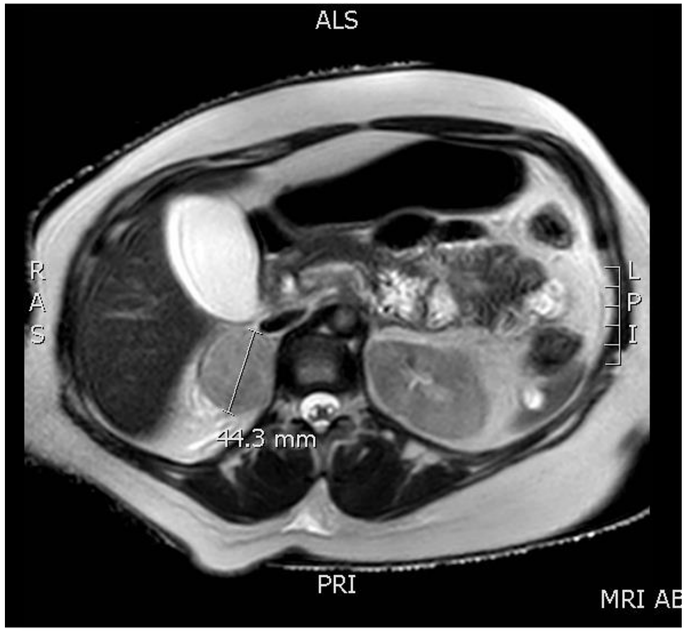

Figure 1: MRI abdomen showing 44.3 mm adrenal mass

Clinical Course

Metoprolol was started for NSTEMI, shortly after had acute rise in BP to 180/100, followed by hypotension and acute respiratory failure requiring intubation and vasopressor support. Echocardiogram at this time was consistent with stress-induced cardiomyopathy. Pheochromocytoma was suspected and MRI abdomen showed an adrenal mass. Respiratory status improved with heart failure management. Biochemical confirmation was made once vasopressors were weaned and urine metanephrine level was highly elevated at 920 ug/g. Phenoxybenzamine and labetalol were titrated to orthostasis. Eventually patient was stable enough to tolerate adrenalectomy and pathology confirmed pheochromocytoma. Cardiac function has since normalized and patient is doing well.

Discussion

Cognitive bias can make it challenging to diagnose rare conditions. In this case, premature closure and anchoring bias likely lead to failure to consider pheochromocytoma as a diagnosis earlier in the patients course. As a result, she nearly died from complications of her disease, potentially as a result of medications administered prior to her diagnosis.

Premature Closure – The tendency to accept a diagnosis before it is fully confirmed.

Anchoring – The inclination to accept a diagnosis early on and fail to reconsider after receiving contradictory information.

Take Home Points

Pheochromocytomas can lead to serious cardiac complications, including death.

Diagnosis is difficult by rarity and overlap of symptoms with common conditions – must have high suspicion.

Must avoid anchoring and premature closure in order to diagnose early in course and avoid morbidity and mortality.

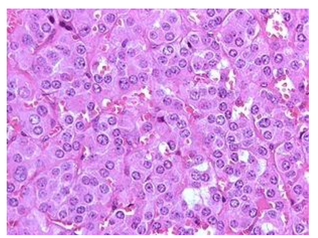

Figure 2: Histopathology of pheochromocytoma

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