Management of Newly Diagnosed Adrenal Mass in the setting of Chronic Hypertension with Superimposed Pre-eclampsia with Severe Features

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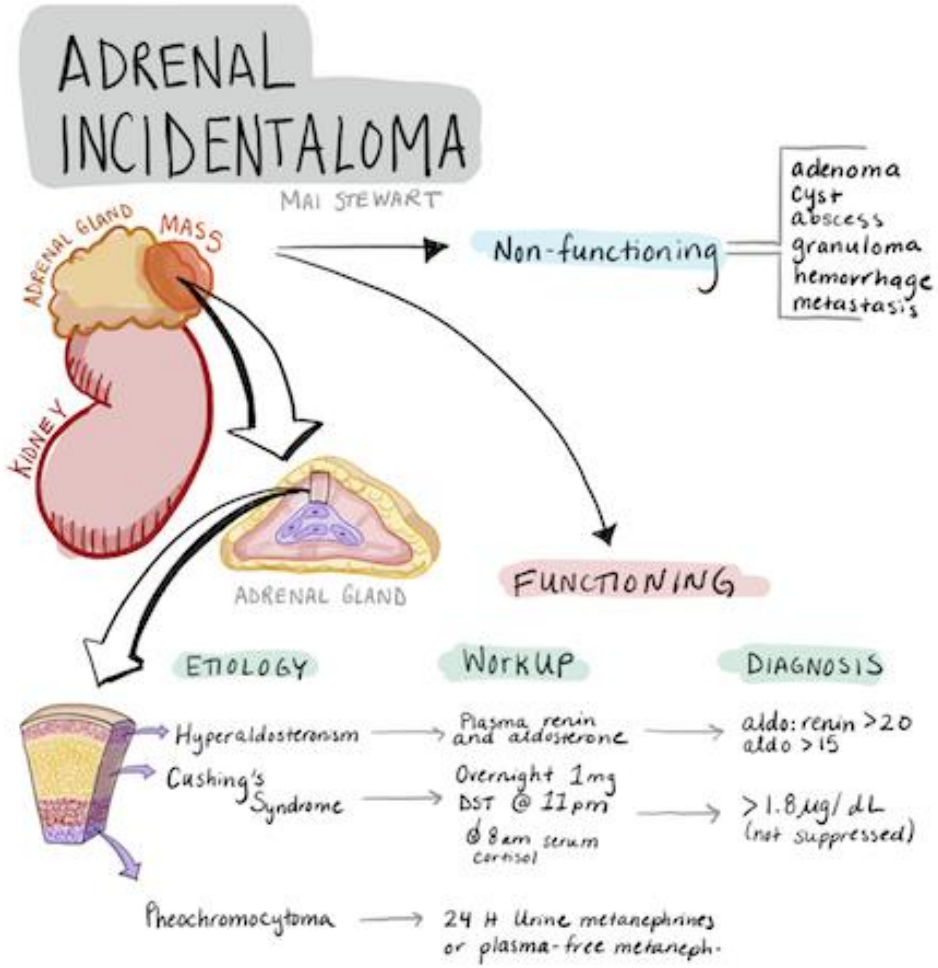
Background

- Most adrenal masses are incidental, prevalence of 1.4% to 7.3%
- Most are non-functional
- Functional adenomas most commonly secrete cortisol or aldosterone, with pheochromocytomas being rare
- Diagnosing an adrenal mass in pregnancy in the setting of pre-existing hypertension can be challenging
- If unrecognized, a hypertensive crisis can lead to maternal and fetal demise



Jing Y, et al. Ann Intern Med. 2022;175(10):1383

Case presentation

- 23-yo G3P0112 at 36w2d with chronic HTN treated with nifedipine presented with a hemorrhagic adrenal mass and superimposed pre-eclampsia with severe features.
- Admitted due to persistent left flank pain and severe range blood pressure
- CTA chest notable for 3.7 cm left adrenal mass
- Labs: Elevated urinary protein and fractionated free plasma normetanephrine, normal electrolytes, creatinine, liver function tests, platelets
- Symptoms: chest pain, headaches with visual changes, diaphoresis
- MRI performed favoring subacute adrenal hemorrhage, however pheochromocytoma could not be ruled out
- BP managed with oral nifedipine, deferred alpha blockade due to concern for hypotension, avoided hydralazine and labetalol
- Repeat cesarean with arterial line placed prior to induction performed uneventfully under CSE
- Follow up CT scan with resolution of left adrenal gland hemorrhage and subsequent normal laboratory work up

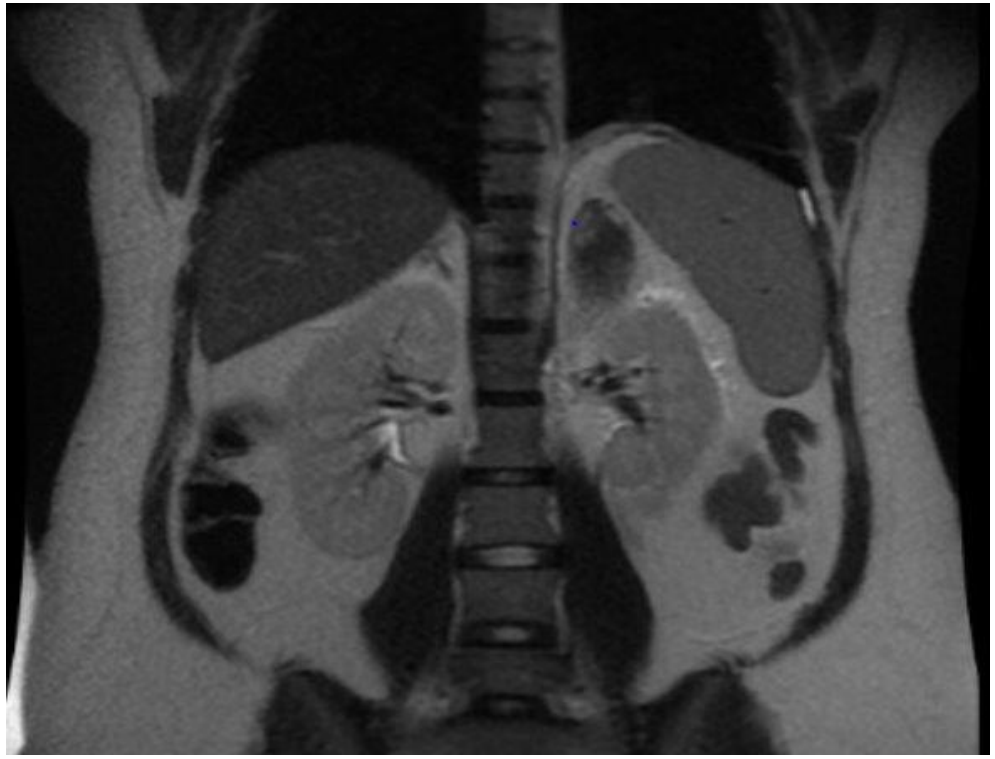


Fig. 1: MRI of left adrenal mass measuring 3.5 cm with imaging features favored to represent subacute adrenal hemorrhage

Evaluation and treatment of catecholamine-producing tumors

Diagnosis: 24-hour urine metanephrines and catecholamines >2x upper limit of normal or "significant increase in fractionated plasma metanephrines

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Localization with abdominal MRI/CT

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Preoperative alpha and beta adrenergic blockade

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Surgical resection if anatomically feasible

Teaching Points

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- Pregnancy related adrenal hemorrhage is rare, reported in 0.14% to 1.1% of pregnancies
- Adrenal masses in pregnant patients require comprehensive workup
- Initial laboratory testing includes evaluation for hormonal hypersecretion (cortisol, metanephrines, renin and aldosterone)
- Factors predisposing to adrenal hemorrhage in pregnancy include increased blood supply to the adrenal glands and hypercoagulable state
- Risk factors for adrenal hemorrhage include underlying adrenal tumors, severe infections, blunt trauma, pregnancy, major abdominal surgery, severe hypertension and coagulopathy

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