

Spontaneous Adrenal Hemorrhage in Pregnancy: A Case Report of Successful Management with Endovascular Therapy

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INTEGRIS

Background

Nontraumatic spontaneous adrenal hemorrhage is rare and can be associated with a variety of conditions such as stress, underlying adrenal tumors and coagulation disorders. Spontaneous adrenal hemorrhage in an uncomplicated pregnancy is uncommon and the incidence has not been well described in the literature. The clinical presentation of spontaneous adrenal hemorrhage includes acute onset of flank, abdominal, chest or back pain. Laboratory findings are nonspecific and show varying degrees of adrenal insufficiency, leukocytosis, and anemia. Treatment is based on severity and can include conservative treatment, surgical resection and endovascular therapy.

Methods

26-year-old female, G1P1, with no significant past medical history, delivered an infant at 41 weeks via a routine spontaneous vaginal delivery. Within 24 hours of delivery, the patient developed sudden onset hypotension as well as severe right flank, back and chest pain.

Methods – continued

CT abdomen/pelvis with contrast revealed a large right adrenal hemorrhage with active extravasation (Figures 1 and 2). Baseline hemoglobin of 11 g/dL dropped to 8 g/dL. Interventional radiology and surgery were consulted. Given that the patient's vital signs were unstable, the patient was taken immediately to the interventional radiology suite for emergent angiogram with possible adrenal artery embolization.

Results – continued

Right renal angiogram demonstrated the origin of the inferior right adrenal artery to be from the proximal right renal artery. Subselection of the inferior right adrenal artery demonstrated active extravasation (Figure 3). A vial of 250 μ m microspheres was injected under fluoroscopic guidance until stasis of the inferior right adrenal artery was achieved. Post-embolization angiogram demonstrated successful embolization of the inferior right adrenal artery.

After the procedure, a combination of a PO beta-blocker and an IV calcium channel blocker were used to control the patient's elevated blood pressure. A random cortisol (12.4 mcg/dl) and eGFR (126 ml/min/1.72 m²) were within normal limits.

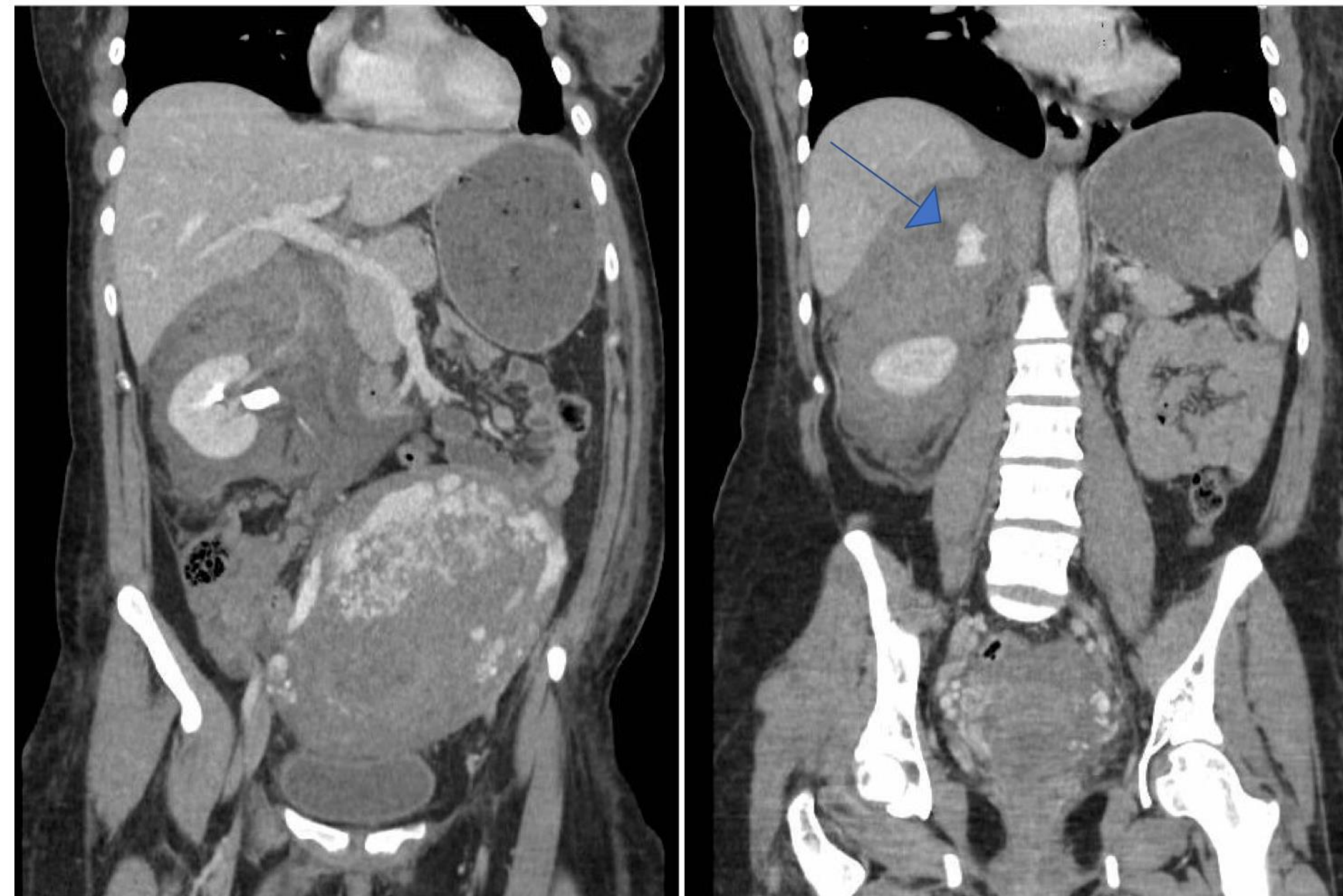


Figure 2: Axial images without (left) and with IV contrast (right) demonstrate a large right retroperitoneal hemorrhage within the region of the right adrenal gland. Delayed imaging demonstrates active extravasation of contrast (arrow).



Figure 3: Fluoroscopic image (left) demonstrates the origin of the inferior right adrenal artery to be from the proximal right renal artery (arrow). Fluoroscopic image (right) demonstrates active extravasation of contrast from the inferior right adrenal artery (arrow).

Conclusions

Spontaneous adrenal hemorrhage in the post-partum patient is rare. A broad range of treatment options exist, however interventional radiology plays an emerging role in the hemodynamically unstable patient with spontaneous adrenal hemorrhage.

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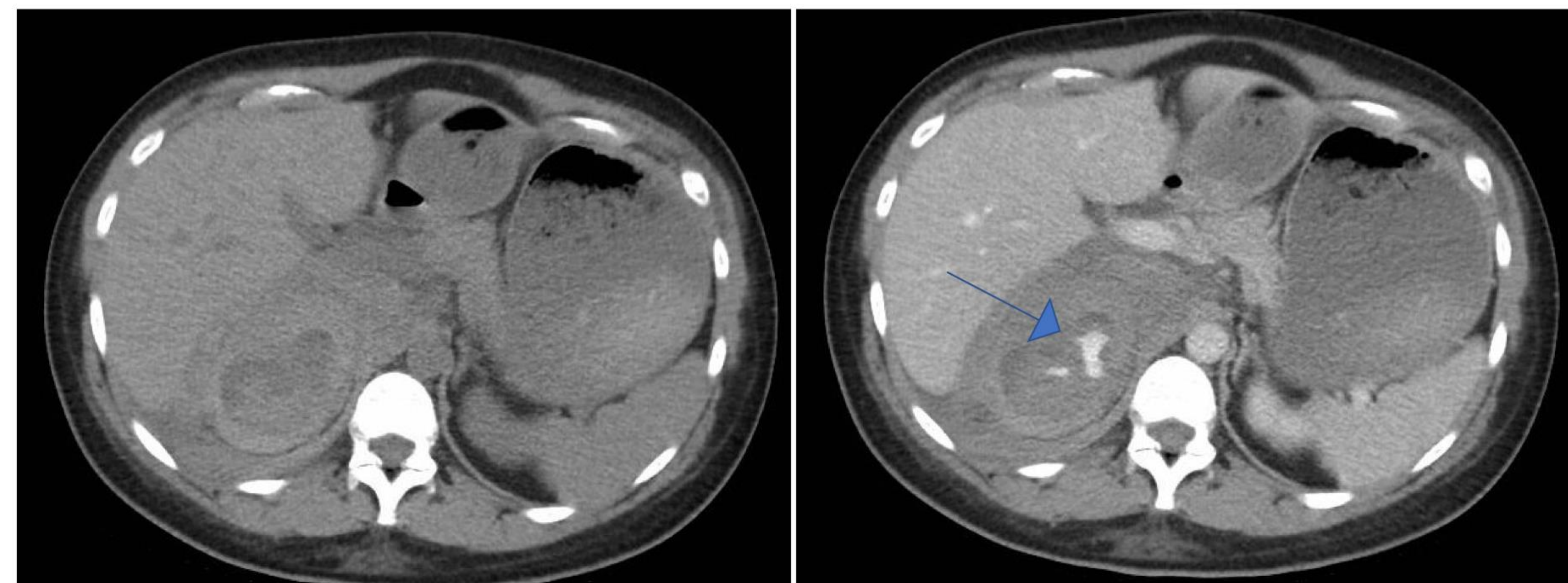


Figure 1: Coronal images with IV contrast demonstrate a large right retroperitoneal hemorrhage within the region of the right adrenal gland. Delayed imaging demonstrates active extravasation of contrast (arrow).