

Adrenal Hematoma in Pregnancy

Sangeeta Pahwa¹, Tavleen Kaur²

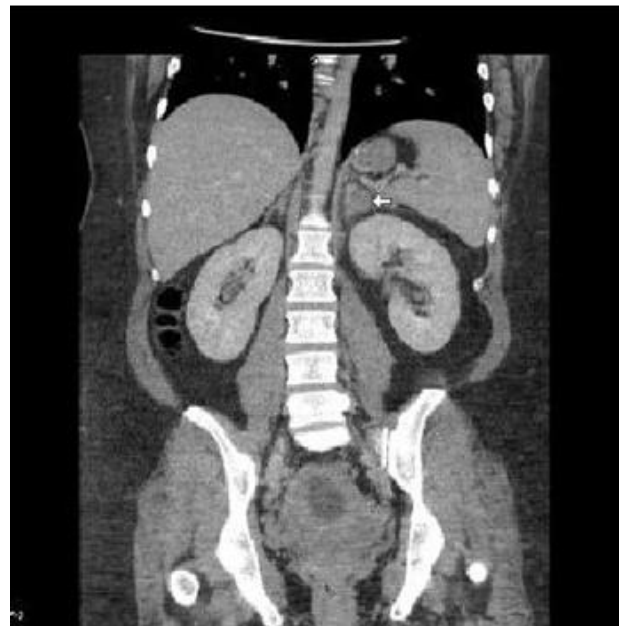
1. Introduction

Spontaneous adrenal hemorrhage is uncommon in pregnancy but it is a serious medical condition associated with variable clinical presentation. Exact incidence during pregnancy is unknown. A low cortisol level with radiological finding is required for its diagnosis. As it can cause life threatening complications, obstetrician should have a high suspicion of adrenal hemorrhage while evaluating abdominal pain during antenatal period. Rarely, patients can develop massive retroperitoneal bleeding and present with hemodynamic instability. If bilateral, SAH can lead to adrenal crisis and shock necessitating emergency laparotomy and adrenalectomy.

2. Case Report

This case report is of a 38 year old female. G₄P₂L₂A₁, presented at 32 weeks period of gestation with one week history of severe left flank pain in emergency with no history of any nausea, vomiting, fever or any urinary complaints, no history of trauma, no history of intake of any anticoagulants and of any coagulopathy.

- Pain was sharp, regular and worsening.
- Her vitals were normal.
- On examination, fundal height was corresponding to the period of amenorrhea. Fetal heart sound was present and was regular with tenderness over left flank. She had two previous uneventful pregnancies.
- All her investigations were normal.
- Her USG FWB was normal but her USG ABD showed hematoma of size 9.3 x 8.0 cm on left side which was confirmed on CT scan. Her serum cortisol levels were normal, the patient was put on conservative treatment (fluid replacement & antibiotic therapy).



On presentation the patient had a blood pressure of 130/90 and heart rate of 70 beats per minute and was saturating 99% on room air

- Initial exam revealed the abdomen to be tender to palpation in left upper quadrant with no guarding and no peritoneal signs. There were no symptoms of labor and fetal status was reassuring.
- Complete blood count, coagulation studies, liver function tests, amylase, and lipase were all within normal limits with a hemoglobin of 12.4 g/dL.
- A urinalysis demonstrated rare bacteria and calcium oxalate crystals, but no blood. A renal ultrasound showed no evidence of hydronephrosis, mass, or stone.
- An obstetrical ultrasound revealed a live singleton fetus with a normal appearing anterior placenta and appropriate fetal growth. Intravenous narcotics were required for adequate pain control.
- A CT scan of the abdomen demonstrated a mildly enlarged left adrenal gland with areas of hyperdensity consistent with acute left adrenal hemorrhage.
- The patient denied any history of abdominal trauma or anticoagulation.
- She was monitored with serial hemoglobin assessments and abdominal examinations and remained clinically and hemodynamically stable.
- She was discharged home at 37 weeks of gestation after a 4-day hospitalization and returned for induction of labor at 39 weeks of gestation. The patient had an uncomplicated, spontaneous vaginal delivery of a female neonate. Her postpartum course was uncomplicated and interval imaging study to assess resolution of the adrenal hemorrhage was planned.

3. Discussion

If unrecognized, adrenal hemorrhage can lead to adrenal crisis, shock, and theoretically death for both mother and fetus and should be considered in the differential diagnosis of abdominal pain in pregnancy. Presenting symptoms are similar to those in nonpregnant patients and include acute onset flank, abdominal or even chest pain, nausea, vomiting, or hypotension. In order to be classified as spontaneous and idiopathic there can be no history of trauma, anticoagulation, tumor, or sepsis.

While the initial abdominal imaging study in pregnancy is typically ultrasound, sonographic findings of adrenal hemorrhage are nonspecific.

- MRI or CT scan is needed to confirm the diagnosis and to evaluate for potential underlying etiology such as pheochromocytoma or malignant tumor.
- On MRI, adrenal hemorrhage appears as a heterogeneous mass with enlargement of one or both adrenal glands while a contrast CT scan demonstrates adrenal echogenicity, streaky appearance of the perirenal fat, perinephric hematoma, or a retroperitoneal hematoma in a massive bleed.
- A follow-up MRI or CT scan is usually recommended to confirm stability or resolution of the hematoma, especially if a conservative approach is adopted. Recommended laboratory evaluations include serial hemoglobin measurements as well as assessment of adrenal function. Consideration should be given to inherited and acquired thrombophilias, including antiphospholipid syndrome, as potential etiologies of adrenal vein thrombosis and subsequent hemorrhage. In the above reported case, platelet count and coagulation parameters were within normal limits and there was no clinical suspicion for thrombophilia.
- Appropriate management of SAH in pregnancy depends on the stability of the patient. Conservative management includes supportive therapy with intravenous fluids, pain control, and serial hemoglobin assessments with blood transfusion and correction of coagulopathy as indicated. Close monitoring of fetal status is warranted.
- Preterm delivery may be indicated if a patient is unstable, worsening, or if adrenal hemorrhage is associated with severe preeclampsia or eclampsia. In hemodynamically unstable patients with ongoing hemorrhage, arterial embolization can be considered, but severely ill patients may warrant emergent adrenalectomy.

4. Conclusion

SAH, although rare, is an important consideration when evaluating abdominal and flank pain in pregnancy. Diagnosis requires a high index of suspicion, particularly when more common etiologies of pain are excluded. Diagnosis can be made by MRI or CT scan. In a clinically stable pregnant patient with SAH conservative management and vaginal delivery are safe and appropriate.

References

- [1] Anagnostopoulos A., Sharma S. Spontaneous adrenal haemorrhage in pregnancy. *BMJ Case Reports*. 2011;2011
- [2] Gavrilova-Jordan L. P., Edmister W. B., Farrell M. A., Watson W. J. Spontaneous adrenal hemorrhage during pregnancy: a review of the literature and a case report of successful conservative management. *Obstetrical and Gynecological Survey*. 2005;60(3):191–195. doi: 10.1097/01.ogx.0000157357.15401.c3.
- [3] Bockorny B., Posteraro A., Bilgrami S. Bilateral spontaneous adrenal hemorrhage during pregnancy. *Obstetrics and Gynecology*. 2012;120(2):377–381. doi: 10.1097/AOG.0b013e31825f20a7.