CASE REPORT

Successful Conservative Management of Spontaneous Unilateral Adrenal Hemorrhage in Pregnancy

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Abstract

Spontaneous adrenal hemorrhage (SAH) in the absence of trauma or adrenal tumor is a rare incidence. Its incidence has been reported from 0.14% to 1.1% and it usually involves the right adrenal gland. During pregnancy, unilateral SAH has been reported very rarely. We describe a case who presented to us with pregnancy-induced hypertension (PIH) and pain in the right flank region for 1 day and diagnosed as a case of spontaneous right adrenal hemorrhage and managed conservatively.

Keywords: Adrenal hemorrhage, Pregnancy, Pregnancy-induced hypertension.

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Introduction

Spontaneous adrenal hemorrhage (SAH) is an acute hemorrhage of the adrenal gland that occurs in the absence of a prior trauma or an adrenal tumor. The main symptoms are flank pain, hemorrhagic shock, and fever in some cases. The incidence of SAH has been reported from 0.14% to 1.1% and it usually involves the right gland.[1] Unilateral adrenal hemorrhage is infrequently associated with otherwise uncomplicated pregnancy, neurofibromatosis and long-term nonsteroidal anti-inflammatory drug use.[2] During pregnancy, idiopathic unilateral SAH is reported to be a rare event with unknown incidence.[3] We describe a case who came to us with PIH and pain in right flank region for 1 day and diagnosed to have spontaneous right adrenal hemorrhage with successful conservative management.

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Case Description

A 30-year-old female G3P2L2 with a 32-week period of gestation and pregnancy-induced hypertension was presented to our department with pain abdomen in right flank region for 1 day. Her previous obstetric history was uneventful.

She was hemodynamically stable. On physical examination, her blood pressure was around 160/110 mm Hg, pulse rate was 92 per minute, and body temperature was 37.2°C. She had pitting edema in the lower limbs. She was on antihypertensive medications for the last 15 days. Her obstetric examination revealed a relaxed uterus, regular fetal heart rate, and tenderness in the right flank region. Her hemogram and serum biochemistry parameters were within normal limits. Abdominal ultrasound (USG) showed a single live pregnancy of 32 weeks with absent liquor and deranged color doppler with brain sparing effect parameters along with an approximately 6.5 × 5.7 cm heterogeneous lesion in right lumber region compatible with hemorrhage in the right adrenal gland. Magnetic resonance imaging confirmed the diagnosis of adrenal hemorrhage.

Her cesarean was done after steroid coverage for the sake of baby. The patient's intrapartum and postpartum periods were uneventful except for the persistent right flank pain for which she was managed conservatively. She got discharged after 2 weeks and was followed up in OPD every 15 days. There were no complaints of flank pain after 1 month. Her repeat CT scan revealed a decreased size of adrenal hemorrhage.

Discussion

Adrenal hemorrhage is a relatively uncommon condition with a variable and nonspecific presentation. The main symptoms of the condition are hemorrhagic shock, flank pain, and fever. Signs of acute abdomen (including guarding, rigidity or rebound tenderness) have been reported in 15–20% because of the retroperitoneal location of adrenals.[4]

Although the pathogenesis of adrenal hemorrhage is unclear but in nontraumatic cases, available evidence has implicated adrenocorticotropic hormone (ACTH), adrenal vein spasm, thrombosis, and limited venous drainage of adrenal as the mechanism behind the condition.[4] Obstetric causes of bilateral adrenal hemorrhage include toxemia of pregnancy, spontaneous abortion, postpartum hemorrhage, twisted ovarian cyst in pregnancy, and more recently described, antiphospholipid antibody syndrome.[5] The present case had also pregnancy-induced hypertension. Isolated case reports in association with a long-term nonsteroidal anti-inflammatory drug use in uncomplicated pregnancy and neurofibromatosis have been reported.

Ultrasonography examination of the adrenals (including a doppler study) provides useful information regarding hemorrhage

into the adrenal gland. Several weeks after the acute event, as the hematoma becomes cystic, the central echogenicity associated with adrenal hemorrhage decreases.

Contrast CT scan of the adrenals is the study of choice in demonstrating the adrenal hemorrhage. In pregnancy, MRI is the investigation of choice. The findings suggestive of hemorrhage into the adrenal are adrenal echogenicity with contrast enhancement, streaky appearance of peri-renal fat, and perinephric hematoma. Several weeks after the acute hemorrhage, the CT scan shows a gradual decrease in size and attenuation.

Spontaneous unilateral adrenal hemorrhage during pregnancy has rarely been described. Our patient was presented with a right flank pain and pregnancy-induced hypertension. MRI confirmed the diagnosis of unilateral adrenal hemorrhage. The patient was managed conservatively. A cesarean was done for fetal indication. On follow-up, after 1 month patient's pain got resolved and CT showed resolving hemorrhage.

Spontaneous adrenal hemorrhage may occur in pregnancy in the absence of a trauma or sepsis and can be managed conservatively if patient is hemodynamically stable. Thus, adrenal hemorrhage should be considered in the differential diagnosis of abdominal or flank pain with retroperitoneal hematoma in pregnancy.

Conclusion

Spontaneous adrenal hemorrhage during pregnancy is a rare condition. It should be considered in the differential diagnosis of pain abdomen in the flank region in pregnant women. Though it can lead to acute adrenal crisis and hemorrhagic shock, it can be managed conservatively if patients' vitals are stable.

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