EM CASE OF THE WEEK.
BROWARD HEALTH MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE

BROWARD HEALTH
Care Warriors

Author: Kelsey Capps PA-S2 | Editor: Dr. Rita Zeidan DO

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Placental Abruption

A 22-year-old G2P1 female at 31 weeks gestational age presents to the emergency department with abrupt onset of vaginal bleeding, lower abdominal pain, and contractions. She has no past medical history and denies trauma however, she admits to smoking a pack of cigarettes a day. Her pregnancy has been uncomplicated and her last sexual intercourse was one month ago. Her previous child was born via vaginal delivery at 40 weeks with no complications. Pt is afebrile with stable vital signs. Physical examination is remarkable for a rigid, tender uterus. Fetal heart tones are reassuring. Peripheral IV is placed and blood is drawn. Ultrasound reveals a retroplacental hematoma. What is the next best step in the management of this patient?

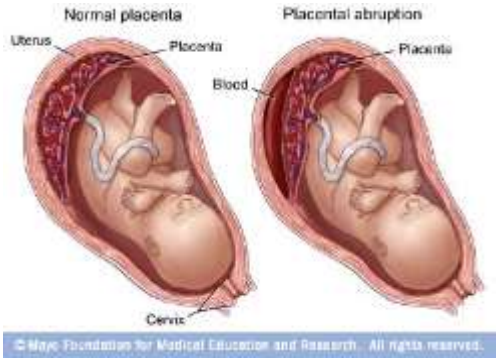
A. CT scan to evaluate the degree of placental separation and hematoma

B. Discharge home and follow up with obstetrics in 2-3 weeks

C. Admit for conservative management with monitoring of patient and fetal heart rate tracings as well as injection of corticosteroids

D. OR for emergent cesarean delivery

E. Octreotide for induction of vaginal delivery



Placental abruption (also referred to as abruptio placentae) refers to partial or complete placental detachment prior to delivery of the fetus.

The picture on the left shows a normal placenta which is attached to the uterus. The picture on the right shows the separation of the placenta from the uterus with blood accumulating.

EM Case of the Week is a weekly "pop quiz" for ED staff.

The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.

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Department of Emergency Medicine
1625 SE 3rd Avenue
Fort Lauderdale, FL 33316

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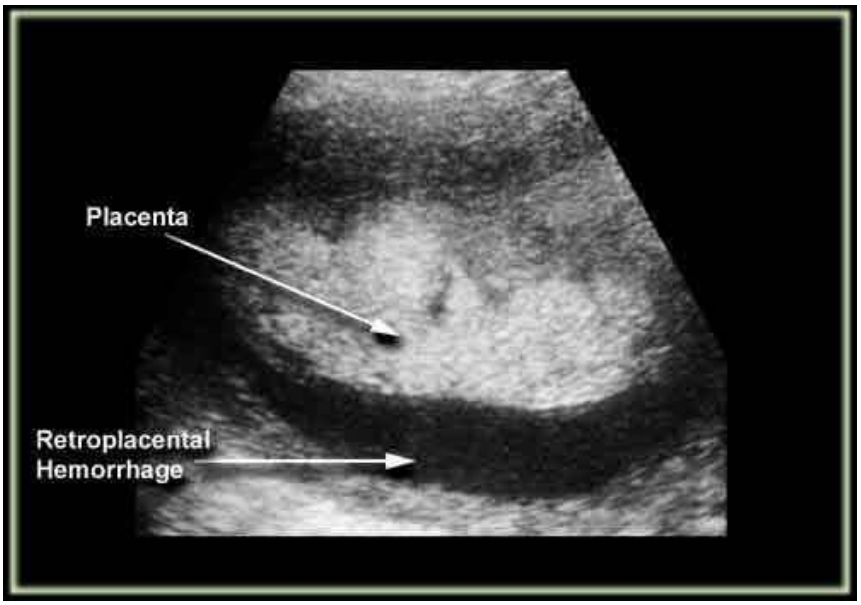
The correct answer is C. When the fetus and mother are both stable, the decision to deliver depends primarily on gestational age, with consideration of ongoing maternal symptoms. Since the fetus is less than 34 weeks gestation, conservative management with the aim of delivering a more mature fetus is the main goal. Administration of corticosteroids is indicted to promote fetal lung maturation as well as continuous monitoring of the patient and fetal heart tones to insure there is no decompensation.



Discussion:

Placental abruption is a major cause of vaginal bleeding and abdominal pain in pregnancies over 20 weeks of gestation. The placenta develops in the uterus during pregnancy. It attaches to the wall of the uterus and supplies the baby with nutrients and oxygen. Placental abruption occurs when the placenta partially or completely separates from the inner wall of the uterus before delivery. This can decrease or block the baby's supply of oxygen and nutrients and cause heavy bleeding in the mother.

Signs and symptoms include: vaginal bleeding, abdominal pain, back pain, uterine tenderness, uterine contractions, and firmness in the uterus or abdomen. The amount of vaginal bleeding can vary greatly, and doesn't necessarily correspond to how much of the placenta has separated from the uterus. It's possible for the blood to become trapped inside the uterus, so even with a severe placental abruption, there might be no visible bleeding

Risk factors include placental abruption in a previous pregnancy, hypertension, cocaine use, smoking, trauma, polyhydramnios, chorioamnionitis, premature rupture of membranes, advanced maternal age, and twins.

Maternal consequences include excessive blood loss and DIC which can lead to hypovolemic shock renal failure, adult respiratory distress syndrome, multiorgan failure, peripartum hysterectomy and, rarely, death. In addition to these acute consequences, the mother is at increased long-term risk of premature cardiovascular disease.

Fetal consequences include Increased perinatal morbidity and mortality related to hypoxemia, asphyxia, low birth weight, and/or preterm delivery.

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Management:

The most important factors impacting the decision to deliver a patient with placental abruption versus expectant management are gestational age and fetal and maternal status.

Dead fetus & unstable mother: Cesarean delivery is often the best option when vaginal delivery is not imminent and rapid control of bleeding is required. Blood and blood products for correction of coagulopathy should be replaced prior to and during the C-section.

Dead fetus & stable mother: Vaginal delivery is preferable. These patients are often contracting vigorously, so amniotomy may be all that is required to expedite delivery. If needed, Oxytocin can be administered to induce or augment labor.

Live fetus with nonreassuring fetal status: Expeditious delivery, usually by urgent cesarean, is indicated if the fetal heart rate pattern suggests an increased risk of fetal acidemia. If vaginal delivery is imminent, then a spontaneous or instrument-assisted vaginal birth is likely the least morbid route of delivery for the mother, whether or not she is hemodynamically stable. Otherwise, cesarean delivery is indicated.

Live fetus with reassuring fetal status and unstable mother: Cesarean delivery is the best option when vaginal delivery is not imminent and rapid control of bleeding is required

Live fetus with reassuring fetal status and stable mother: The decision to deliver depends primarily on gestational age.

-Less than 34 weeks of gestation- conservative management with the aim of delivering a more mature fetus is the goal. Administer corticosteroids to promote fetal lung maturation. Admit for maternal monitoring and fetal heart tracing. Once patient is asymptomatic, discharge and schedule delivery for 37-38 weeks because of increased risk of stillbirth.

-34-36 weeks of gestation: Delivery is typically recommended since these patients remain at risk of maternal and fetal compromise.

-36 weeks to term- Deliver all of these pregnancies. If there is no obstetrical indications for cesarean delivery, vaginal delivery is preferred.

Take home points:

- Placenta abruption needs to be ruled out in any pregnant female, beyond 20 weeks gestation, that presents with painful vaginal bleeding.
- Major risk factors include prior abruption and trauma. Other risk factors are listed above.
- The diagnostic finding on Ultrasound is a retroplacental hematoma, but is not always present.
- Management is primarily based around gestational age and fetal and maternal status.

This month's case was written by Kelsey Capps. Kelsey is a physician assistant student at Nova Southeastern University. She did her emergency medicine rotation at BHMC in July 2018. Kelsey plans on pursuing a career in pediatric orthopedics after graduation.

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