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EM CASE OF THE WEEK

BROWARD HEALTH MEDICAL CENTER DEPARTMENT OF EMERGENCY MEDICINE

AUTHOR: ELENI SIANI, MS IV
EDITOR: ANDREA SARCHI, DO

Spontaneous abortions, also known as miscarriages, affect up to 20% of recognized pregnancies. These patients may present to the ED with or without having received previous prenatal care and counseling. It is important that we give the appropriate care and communicate well during what might be an emotional and confusing time for the patient and/or their partner.

EM CASE OF THE WEEK

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.

Spontaneous Abortion

A 32-year-old G3P2 pregnant female presents to the ED with vaginal bleeding and abdominal cramping. She was seen in the ED five days ago for pelvic pain and was found to have a missed abortion at 14-15 weeks gestation. Two days ago she was seen at an obstetrics clinic and a repeat ultrasound found an intrauterine pregnancy with no fetal heart activity. Options for management were discussed and the patient decided to schedule a dilation and evacuation the following week. She was told to return to the ED if she experienced pain or bleeding. Early this morning, she experienced vaginal bleeding and has had abdominal cramping and pain since then. On physical exam, her BP is 106/70, HR is 89, and she is afebrile. She is visibly in pain and lying on her side. She is able to discuss and answer questions. Her lower abdomen is tender to palpation. Her last meal was 4 hours ago. Which of the following is the best next step in management?

A. Begin broad spectrum antibiotics and rush the patient to the OR for an emergent hysterectomy

B. Complete an OB ultrasound in order to confirm that the patient has miscarried

C. Send the patient home with instructions to attend the D & E scheduled for next week

D. Arrange for the patient to have a Dilation & Evacuation by an OB/Gyn as soon as possible

E. Prescribe Misoprostol in order to complete a medical abortion

BROWARD HEALTH MEDICAL CENTER

Broward Health Medical Center
Department of Emergency Medicine
1625 SE 3rd Ave
Fort Lauderdale, FL 33316

Take Home Points

- A missed abortion is a nonviable intrauterine pregnancy that has not been expelled spontaneously and the cervical os is closed
- Management of a missed abortion can be surgical, medical, or expectant, and patient preference will play a large role in deciding the best way to proceed
- Definitive diagnosis is most often made by transvaginal ultrasound
- Patients who are hemodynamically unstable, septic, or having intractable pain must undergo surgical dilation and evacuation of the uterus
- News of a miscarriage may be hard for some patients to hear. It is important for emergency physicians to be direct and concrete about the information being delivered

Spontaneous Abortions

The correct answer is D. This patient is hemodynamically stable but in distress and should undergo a dilation and evacuation as soon as possible. In addition, the patient has had a previous discussion and decided a D&E would be the best course of management for her. If general anesthesia will be used during the procedure, it may be necessary to wait until the patient has an empty stomach.

A spontaneous abortion is defined as a pregnancy loss without outside intervention before 20 weeks gestation. When diagnosing a spontaneous abortion, there are several sub-classifications that will help to direct management decisions.

- **Threatened Abortion:** Viable intrauterine pregnancy is still present but vaginal bleeding has occurred and the cervical os is closed
- **Missed Abortion:** Nonviable intrauterine pregnancy that has not been expelled spontaneously and the cervical os is closed
- **Inevitable Abortion:** Products of conception have not yet been expelled but the cervical os is open
- **Incomplete Abortion:** Some products of conception have been expelled but not all
- **Complete Abortion:** All products of conception have been expelled
- **Septic Abortion:** Spontaneous abortion that is complicated by intrauterine infection. The cervical os is usually open

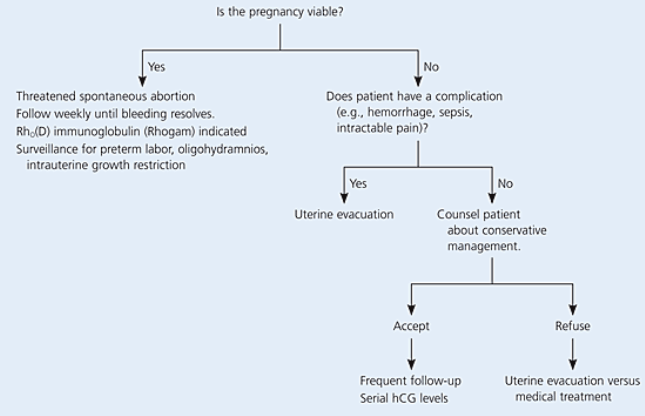
Etiology and Risk Factors: The two most common causes for spontaneous abortion are chromosomal abnormalities and exposure to teratogens; however, the **cause of a spontaneous abortion is often difficult to determine on an individual basis**. It can be due to fetal factors or maternal factors. Fetal factors include chromosomal abnormalities, congenital anomalies, and trauma. Maternal factors include structural issues of the uterus, advanced maternal age, and maternal disease. Exposure to alcohol, caffeine, cigarette smoke, recreational drugs as well as teratogenic medications all increase the risk of spontaneous abortion. (*cont'd next page)*

Clinical Presentation: Miscarriages often present as vaginal bleeding or pelvic and abdominal pain. The **amount of bleeding cannot predict a spontaneous abortion.** Bleeding may include the passage of clots and fetal tissue. Spontaneous abortions can also be an incidental finding on ultrasound in patients who are asymptomatic. Spontaneous abortions can also be identified in women with unrecognized pregnancies.

Diagnosis: Spontaneous abortion **is most often diagnosed by transvaginal ultrasound** findings of a nonviable pregnancy. Diagnosis may also be made if beta-HCG levels plateau or decrease, or if progesterone levels are found to be less than 5 ng per ml. In order for a spontaneous abortion to be diagnosed, an intrauterine pregnancy must be present. It is important to rule out an ectopic pregnancy if a patient presents with vaginal bleeding in the setting of a positive pregnancy test. **A pelvic exam is another important component of diagnosing a spontaneous abortion so that the type of abortion can be determined.** If a pelvic exam reveals a dilated cervix, a spontaneous abortion is inevitable.

Management: Once a spontaneous abortion is diagnosed, management can be surgical, medical, or expectant. Dilation and evacuation of the uterus is the surgical procedure and is usually performed outpatient with general or local anesthesia. If a patient is hemodynamically unstable, surgical management is necessary. Medical management includes the use of misoprostol and mifepristone and is usually completed in the home of the patient if the miscarriage occurs at <16 weeks gestation. It can take several days to complete the medically-induced passage of products of conception. **It is important to discuss each method of treatment with the patient and consider their preferences before moving forward with treatment.** Women who are Rh(D) negative should be given Rh(D) immunoglobulin to prevent alloimmunization.

Management of Spontaneous Abortion



Discussion: The Emergency Department is a fast paced environment that does not afford much time for physicians to prepare what they will say to patients. In the case of spontaneous abortions, women and their partners will have a range of prior knowledge and experience when it comes to obstetrical issues as well as a range of reactions when learning they have miscarried. Management of a spontaneous abortion will most likely be discussed further with an obstetrician, but the emergency room may be a patient's first point of contact with the medical system. It is important to communicate so that the patient will understand and deliver any bad news in a way that is direct and concrete in what the patient must do next. The SPIKES protocol for giving bad news can be a useful reminder for how to have these conversations in an efficient and supportive way for both the patient and physician.

"SPIKES" protocol for giving bad news

- **S**et up the interview: mental and physical preparation
- **P**erception: assess what the patient knows about the medical situation
- **I**nvitation: ask how much they want to know
- **K**nowledge: give the medical facts
- **E**motion: respond to patients emotions
- **S**trategy and summary: negotiate a concrete follow-up step

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ABOUT THE AUTHOR:
This month's case was written by Elena Siani. Elena is a 4th year medical student from UVM COM. She did her emergency medicine rotation at St. Mary's Hospital in April 2016. Elena plans on pursuing a career in Obstetrics and Gynecology after graduation.