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

Care Warriors

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Septic Abortion

30 year old G5P3013 female presents to the ED with severe abdominal pain and vaginal bleeding. The pain started two days ago, is located in the pelvic area, and does not radiate. The pain is described as a constant, sharp pain, rated 8/10. Nothing alleviates the pain. She has tried Tylenol with no relief. Patient admits to feeling nauseated and dizzy. Patient started bleeding two days prior to presentation and is now saturating 1 pad every 2 hours. She admits to developing strong malodorous discharge in the last 24 hours. Her gestational age is 10 weeks with confirmed intrauterine pregnancy by TVUS 1 week ago. She denies fevers, chills, or other GI/GU symptomatology.

Her OB Hx is significant for one complete spontaneous abortion in 2012, and 3 healthy pregnancies after. She denies any medical conditions and her only daily medication is PNV.

VS- BP: 120/78, HR: 149bpm, RR: 20, T: 100.8F, pO2: 98% RA. On physical exam, she is in no acute distress. CV and pulmonary exams are non-contributory. Her abdomen is soft, non-distended, and moderately tender to palpation in the lower quadrants, worst at suprapubic area. No rebound tenderness. No lymphadenopathy. On pelvic exam, she has white vaginal discharge and mild cervical motion tenderness. Uterus is anteverted, mobile, and 7-weeks size. No adnexal masses noted. What is your best next step?

A. CT Scan of abdomen/pelvis w/wo oral/IV contrast
B. Transvaginal US
C. MRI
D. Fluid resuscitation and empiric antibiotics
E. Take immediately to OR

Spontaneous abortion is defined as the loss of a clinically confirmed pregnancy before 20 weeks gestational age

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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The correct answer is D, fluid resuscitation and empiric antibiotics.

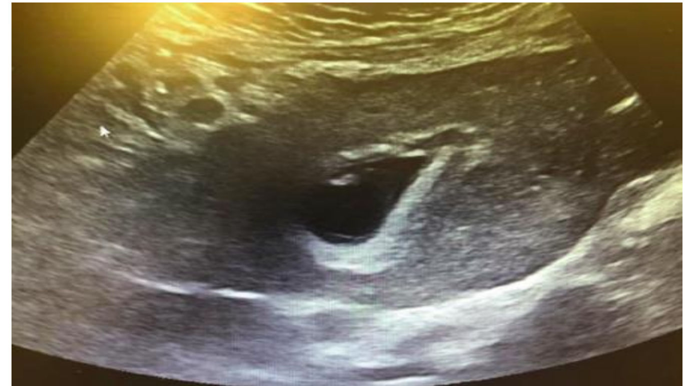
The patient is presenting signs and symptoms of sepsis. She is febrile, tachycardic, and with a physical exam pointing towards a possible cause of infection. The patient had also presented 1 week prior to the ED complaining of burning with urination and abdominal pain. She was then diagnosed with a UTI and was sent home on Bactrim. At that time, she was not bleeding and was afebrile. After IVF and antibiotics were started, a TVUS was performed. The US revealed a gestational sac and a yolk sac consistent with a 6-week gestational intrauterine pregnancy. No fetal pole or heart beat were identified. Given her presentation, vital signs, vaginal bleeding, and TVUS results, a diagnosis of septic abortion was made and patient was admitted to the OB service for D&C.

Discussion:

Spontaneous abortion is defined as the loss of a clinically confirmed pregnancy before 20 weeks gestational age. During the first trimester, the rates of spontaneous abortion are as high as 20%. There are multiple risk factors for spontaneous abortion, and these can be divided into fetal and maternal factors.

Fetal Factors – Chromosomal abnormalities are the most common cause of spontaneous abortion during the first trimester. Up to 75% of those occur before the eight week of gestation. Congenital abnormalities and trauma during invasive testing are other causes of fetal loss.

Maternal Factors- These include teratogen exposure, uterine abnormalities, and maternal disease. Teratogenic exposures such as environmental chemicals, cigarette smoking, and alcohol consumption increase the risk of spontaneous abortion.



TVUS of our patient showing 6-week size gestational sac without fetal heart activity

Uterine abnormalities include bicornuate or septated uterus, extensive fibroids, or uterine adhesions from previous uterine surgeries. Maternal disease also plays a big role in increasing the risk for abortion. Certain viruses acquired in early pregnancy can cause severe congenital abnormalities leading to an early loss. Chronic diseases that are uncontrolled also have a significant impact in early fetal loss. These include diabetes, hypertension, systemic lupus erythematosus, and thyroid disease.

Treatment

Managing septic abortion aggressively is very important because the condition is life-threatening. Management begins with resuscitation with intravenous fluids and empiric antibiotics. When further work-up confirms the diagnosis, dilation and curettage is the definite treatment. Antibiotics are usually given IV the first 48 hours and then patient is transition to oral antibiotics. Common agents include:

- Cefoxitin (2g Q6H) + doxycycline OR
- Cefotetan (2g Q12H) + doxycycline OR
- Clindamycin (900mg Q8H) + gentamicin (3-5g Q24H)

For a list of educational lectures, grand rounds, workshops, and didactics please visit **BrowardER.com** and **click** on the ***"Conference"*** **link**.

All are welcome to attend!

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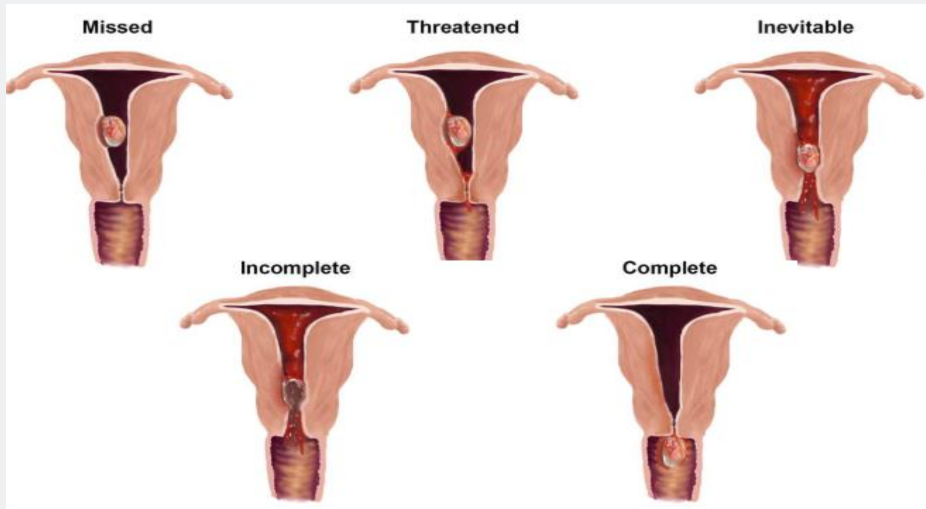

Types of Spontaneous Abortion

Missed: Fetus is non-viable but all product of conception (POC) are retained within the uterus. No vaginal bleeding is seen. Cervix is closed.

Threatened: Vaginal bleeding that occurs during the first 20 weeks of gestation. The fetus is viable and the cervix is closed. Management includes observation and pain relief.

Inevitable: Vaginal bleeding and cramping. Cervix starts to dilate but POC are still retained.

Incomplete: Partial expulsion of products of conception with a dilated cervical os. Management can include curettage, observation, or expectant management.

Complete: All products of conception are expelled.

**Of note, implantation can also cause light bleeding and lasts a few days. This bleeding is not as heavy as a period and it is expected on the days the woman would've had her period.

Take Home Points

- Even though vaginal bleeding during pregnancy is abnormal, it can be seen when implantation occurs.
- Any pregnant patient who presents with bleeding and a fever should be worked up immediately to rule out septic abortion.
- It is important to be aggressive with resuscitation and start antibiotics immediately when septic abortion is suspected.
- Definite management of septic abortion includes antibiotics and dilation & curettage in the OR.
- It is also important to rule out ectopic pregnancy in a pregnant patient who is bleeding and hemodynamically unstable.

ABOUT THE AUTHOR

This month's case was written by Lina Loza. Lina is a 4th year medical student from FIU Herbert Wertheim College of Medicine. She did her emergency medicine rotation at BHMC in October of 2018. Lina plans on pursuing a career in Obstetrics and Gynecology with the Air Force after graduation.

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