Anastassia's

TR PEARL

when you got the flow, but you're pregnant

I wanted to start things off with a population near and dear to my heart, our vaginal bleeding in pregnancy patients. Our EDs take care of pregnant women only in their first trimester, and that is when 80% of miscarriages occur. As you think about the differential, I thought I'd refresh everyone's memory about the work up for this chief complaint. This one goes out to our day 2 interns learning new skills and asking great questions, and our 2nd years getting a break from the B-side with some pelvic exams.

Exam

Optimize yourself for success. Be confident!
Prepare for a lot of blood. Get lots of 4x4s and wrap them around a pair of forceps. Place several layers of blue chux between your stool on wheels and the patient.

As you start your external exam, if you see a continuous gush of blood, you need the OR. Stop here. Call OB stat.

Often times, we see dark blood that isn't moving, and immediately call OB. Now this is often clot that is just sitting in the vaginal vault. This is why you have gauze and forceps. I empower you to evacuate that clot in order to figure out the rate of bleeding from the os. OB uses the same 4x4s and forceps to get their exam, so you can do it too. As you remove the blood soaked gauze, drop it on the chux below you so the patient is spared seeing their blood.

Once you've evacuated the clot, look at the os. How quickly is the blood coming out? If you see blood filling up the bottom of the speculum quickly - another reason to call OB stat. If you get to the os and there is only mild bleeding, you can proceed with the rest of the work up. If there are fetal products that are coming out of the os, remove them to provide immediately relief to your patient.

After you have evacuated the clot, perform the bimanual exam to evaluate if the os is open or closed. If the os is open, the patient is most likely having a miscarriage.

Labs

Aside from your typical **CBC, BMP,** you get in most bleeding patients, it's important to get **2x type and screens, and LFTs**. The type and screen is not only there to send to the blood bank to make it easier to order blood products later, but it also tells you the patient's Rh status. If the patient is Rh-, it is important to give 50 mcg Rhogam prior to patient's departure. Note that this is different dose than the 300mcg of Rhogam you give during 3rd trimester vaginal bleeding. The lab will not mark the Rh- status as abnormal, so it's important to specifically look for it.

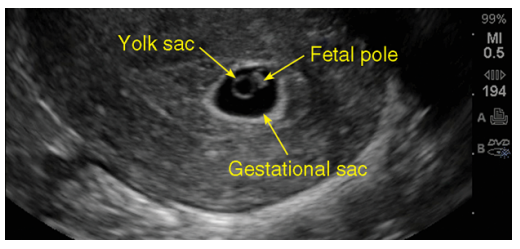
LFTs are also important to get if the patient is having an ectopic or miscarriage, as methotrexate cannot be administered without LFTs, as it can affect the liver.

Ultrasound

Like a set of Russian nesting dolls, the early anatomical structures fit one within the other. First, you have the anechoic gestational sac. Ideally, it is surrounded by the uterine wall. The hyperechoic bubble inside is called the yolk sac. Subsequently, you have the kidney-bean-shaped fetal pole, adjacent to the yolk sac. The rhythmic movement inside the fetal pole is your heart motion. The approximate times of development of these anatomical structures are:

Anatomy	Weeks from LMP	b-HCG level (mIU/mL)
Gestational sac	5	1000
Yolk sac	6	2500
Fetal Pole	7	5000
Fetal Heart Motion	6-7	7000

Your main questions with ultrasound are:
1) Is the pregnancy in the uterus?
You can only say yes if you see a gestational AND a yolk sac in the uterus. Otherwise, look in the adnexa for an ectopic pregnancy. It is an ectopic until proven otherwise, even if you don't find any structure in the adnexa.



2) Does the fetus have a normal heart beat?
If all the structures of your Russian nesting doll fetus have been found, then you look for the heart rate. Using M mode you center it on the movement in the fetal pole and measure the heart rate. Normal is between 110 and 160 beats per minute.

the most important part

The most important aspect of the evaluation is the compassionate care you provide during it. As we are taught in med school, it is never normal to bleed in pregnancy. It doesn't mean something is wrong, but it's not normal. Our patients know that and are scared. Take the time to explain to them your concerns during the evaluation. As your differential changes - after the pelvic exam, after the ultrasound when you already have an interpreter on the line, update your patient. You are already in a private room for the exam, so take advantage of the quiet space away from the ED chaos to compassionately explain your concerns.

TL; DR

Be confident with your pelvic exam. Evacuate that clot!

Get T&S and LFTs

Confirm IUP: gestational sac AND yolk sac in uterus

Deliver compassionate care