SAMPLE WORK-UP

ID: Patient is 21 yo G2P1001 At 32 2/7 GA determined by serial U/S Admitted for vaginal bleeding.

HPI: The patient first noticed vaginal bleeding this morning when she work up at 6:25 am to use the restroom. She noticed bleeding in her clothing and blood clots in the toilet bowl. She was transported by ambulance to the hospital from the prison she has been for 4 months. She reports bleeding 1 cup (~250cc) total this morning. In addition, she has a positive h/o placenta previa with her current pregnancy determined by U/S. She denies any similar episodes in the past with either pregnancy, as well as having pain, cramps, nausea, fever, chills or recent trauma.

Prenatal Care: Dr. _____ at Farm Worker's Clinic

Pregnancy complicated by:

1) Partial placenta previa

PNL:

- Blood type: O+
- Rubella Ab titer: Immune
- VDRL: NR
- Hep B: NR
- Cervical gonorrhea & Chlamydia culture:
- Pap smear: normal
- PPD: not done
- Sickle prep: not done
- HIV test: NR
- Glucose test: Denies having it done
- Group B strep: not done
- Herpes: Denies
- Seizures: Denies
- Hep C: NR

PMH:

Gyn PMH:

- Menarches: 15 yoa
- Menses: Regular 28 day cycles with 4 day duration menses; heavy flow first two days and becomes gradually lighter toward end of menses
- Contraception hx: Denies use of barrier or hormonal methods.

Ob PMH:

- 2002: C-section 2ary to non-reassuring fetal heart tracings, boy, wgt: 7 lbs. Given for adoption.

PSH:

- c-section: 2002, no complication
- Indirect hernia: At 5 yoa

Current medications: Prenatal multivitamins

Allergies: Penicillin

Habits/risk factors:

- EtOH: Denies use
- Tobacco use: Denies use
- Recreational drugs/others: Marijuana, every other day; has not smoked since incarceration 4 months ago.

SH: The patient grew up in California with her mother and she has no siblings. She has an 11th grade education. She came to visit a friend in Yakima, WA, one year ago and has stayed in Yakima ever since. She denies having a job and states to meet her financial needs by having friends and her mother help her with finances.

FMH: Unremarkable

PE:

- VS: BP: 116/73 (sitting), P: 89, RR: 18, T: 36.7
- Gen: Well-nourished, slender body habitus, A & O, in NAD
- Skin: Pink, cool and dry
- Pulmonary: LCAB
- Back: No CVA or spinal tenderness to percussion
- CV: RRR, no murmurs heard.
- Abd: Borborgymi present. Distended, no tenderness to palpation
- Fundus: 32 cm, firm
- Extremities: No edema

- NST: baseline FHR of 137, reactive with accelerations and frequent variability
- U/S: Reveals placenta with partial coverage of cervical internal os.

Assessment:

1) Hemodynamically stable 21 yo G2P1001 with vaginal bleeding and U/S consistent with placenta previa.

Differential Diagnosis:

1) Obstetric causes:
    a. Placental: Placental previa, placental abruption, circumvallata placenta, placenta accreta, placenta increta, placenta percreta
    b. Maternal: Uterine rupture, clotting disorders
    c. Fetal: Fetal vessel rupture

2) Non-obstetric causes:
    a. Cervical: Severe cervicitis, polyps, benign/malignant neoplasms
    b. Vaginal: Lacerations, varices, benign/malignant neoplasms
    c. Other: Hemorrhoids, bleeding disorder, abd/pelvic trauma

Discussion:

There are multiple causes of vaginal bleeding on the third trimester of pregnancy. Placental causes of vaginal bleeding include placental abruption, which is seen in 30% of 3rd trimester hemorrhages. IN placental abruption, there is a premature separation of normally implanted placenta from uterine wall resulting in hemorrhage between uterine wall and placenta. It can present with painful bleeding, but no always, in conjunction with abdominal paint, uterine tenderness and uterine contractions. Risk factors for placenta abrupta are hypertension, history of abruption, trauma, AMA, cigarette/cocaine use, rapid decompression of overextended uterus. When placental abruption is considered as a possible cause of vaginal bleeding, it is necessary to obtain a CDC, coagulation panel, fibrinogen levels, FDP, Apt test, ultrasound, and sterile speculum exam. In addition, blood type and cross match should be ready in case of emergency.

Placenta previa occurs in 20% of 3rd trimester hemorrhage and should also be part of the differential diagnosis. Placenta previa occurs when there is abnormal implantation of placenta over internal cervical os, which an be complete, partial or marginal. The classic presentation of placenta previa involves painless vaginal bleeding (in 70% of cases), and it is more common in the third trimester. Risk factors for placenta previa include prior placenta previa, uterine, scars, multiple gestations, multiparity, prior cesarean, cigarette smoking, and weakly with AMA. The average gestational age at the time of first bleeding episode is 29-30 wks. Although bleeding may be substantial, is usually resolves spontaneously. The bleeding is a result of separation of part of the placenta from the lower uterine segment and cervix, perhaps in response to small UC's. The basic management of patients with placenta previa includes hospitalization with hemodynamic stabilization, followed by expectant management until fetal maturity has occurred or delivery, preferably by c-section, if pregnancy is equal to or over 37 wks gestations. Maternal blood loss should be replaced to hematocrit within normal limits in pregnancy Rh immune globulin should be given when isoimmunization is a concern (i.e. Rh neg patients).

When encountering a patient with placenta previa the possibility of placenta accreta and its variants, placenta increta and placenta percreta, should be considered. Placenta accreta refers to placental attachment directly to the myometrium. In placenta increta, the placenta invades the myometrium. Placenta percreta is a more server form, with penetration of the thickness of the myometrium and beyond. Invasion can extend to the bladder. Risk factors associated with placenta accreta are prior c-section and any other uterine surgeries. A presentation of placenta previa plus previous h/o other uterine surgery carries a 4% incidence of placenta accreta. In addition, a history of c-section plus a presentation of placenta previa in current pregnancy is associated with a 10-35% incidence of placenta accreta. Management of placenta accreta depends of whether

uterine preservation is an option or strongly desired. Two thirds of patient with a placenta accreta require cesarean hysterectomy. Other surgical interventions to stop blood loss that have been successful are packing lower segment with subsequent vaginal removal of packs in 24 hours and interrupted circular suture of lower uterine segmentation on serosal surface of uterus. If complete placenta accreta is suspected or confirmed management should include having at least 4 units of matched blood on hand, an anesthesiologist present in room, and surgical instruments sterile and ready for delivery. Hysterectomy is associated with the most survival and least morbidity of the treatments available for placenta accreta. There are three other options that preserve the uterus. The first option involves oversewing uttering defects after placental removal in conjunction with oxytocics and antibiotics. The second option is localized resection of uterus and repair. The third option entails curettage of uterine cavity. A fourth option is to leave the placenta in situ and removed at a later date, around two months. ON occasion, ballooning of the abdominal aorta is used to minimize blood loss.

Abruptio placentae constitutes a premature separation of the normally implanted placenta from the uterine wall. Although abruption placentae share some of the clinical feature of placenta previa, particularly vaginal bleeding, it is often accompanied with abdominal discomfort and painful uterine contractions, which distinguishes it. Erica's U/S assessment showed no hemorrhage into the decidua balsalis or other signs of abrupto placentae, as well as no clinical presentation of pain or UC's.

Rupture of a fetal vessel is also a possibility in vaginal bleeding during pregnancy. Signs that support fetal vessel rupture are fetal tachycardia followed by bradycardia and by examination of the lbood passed vaginally with an APT test (hemoglobin alkaline denaturation test).

The approach to a patient with vaginal bleeding in the second half of pregnancy should being by promptly assessing fetal and maternal status. Ultrasonography, cervical examination, and lab work including Kleihauer-Betke (KB) test can bring new clues as to the etiology of the patient's vaginal bleeding. Adjunct tests include color Doppler to assess for placenta accreta and APT of vaginal blood.

Based on the patient's negative history for 2nd trimester vaginal bleeding, premature labor, PPROM, closed cervix and lack of labor contractions, it is unlikely that her vaginal bleeding is a sign of premature labor. The patient has a positive history of placenta previa with this pregnancy in addition to a previous c-section which leads to suspect vaginal bleeding caused by partial placenta previa. U/S/ revealed no signs of placenta accreta, increta, or percreta. The best medical approach for her pregnancy's gestational age is expectant management in the hospital with bed rest, with details discussed below.

Plan:

1) Hospitalize patient and initiate bed rest for at least 5 days for evaluation
2) Assess maternal and fetal status by monitoring maternal vital signs and NST for fetal heart function daily for hospital stay duration.
3) Ultrasound uterus and evaluate fetal growth, movement, and heart functioning, placental location and implantation status.

References:

Placenta Accreta. UpTpoDate. Sept 2005

Beckmann, C. Obstetrics and Gynocology. 4th Ed., p. 286-290 and P. 178.

Gabbe, Obstetrics: Normal and Problem Pregnancies. 3rd edition. P. 511-516

SAMPLE WORK- UP

Patient:

ID/CC: 21 y.o. Go presenting for annual exam

HPI:

1. Health maintenance/well woman exam: She states that she has not received medical care since the age of 17, and I s establishing care at the HMC Women's Clinic. She is recently engaged and has never had a pap smear or testing for STDs/HIV and would also like to have this done today. She has questions about hormonal contraception and would like to discuss "the patch" today.

2. "Depression": Patients is concern that she may be depressed. She states she was in her normal state of health until one year ago, when she lost her job, and since then has been feeling down, more tearful than usual, with feelings of worthlessness at least every other day. She has problems concentrating and with motivation. She states that she has not looked for a new job because "I know I will not get one because I'm not good enough".

   She states that she has been eating less than usual; her appetite is decreased, and is more sensitive to criticism. She has lost 10 pounds in the last year, but is very upset if she gains weight. She denies a history of anorexia or bulimia, and denies inducing vomiting after eating, eating large quantities at once, or intentionally restricting her diet. Her fiancé has noticed that she is less interested in things that she used to enjoy, although she denies anhedonia. She states that she cries more easily and is tearful quite often, although she is not sure why she is crying.

   She states that she sleeps eight to nine hours a night, has no difficulties falling asleep or waking up during the night, but finds it very difficult to wake up in the morning. She also states that she feels tired during the day and finds herself taking frequent naps in the afternoon.

   Patient states that she has thought about suicide and has thoughts of "why is life worthy living?", but denies planning for suicide, suicide attempts, or self-harming behaviors.

3. H/O of anemia. She was diagnosed with anemia at age 17 and is currently taking multiple vitamins with iron. She states that she feels tired and has no energy.

PMH: See HPI

PSurgHx: None

POBHx: G0.

PGynHx: Menarche at 12. Regular periods q month, lasing 3 days.

Coitarche at 20, with one lifetime sexual partner, her fiancé. She believes that she is also his first and only sexual partner, but would like to be tested for STDs. Patient is using condoms as her only method of birth control, and has never taken oral contraceptives or used another form of birth control. She is interested in the "patch". She has no history of STDs, or pap smears, vaginal discharge, itching, odor, or abnormal bleeding, although she states she has pain during intercourse with initial penetration and deep penetration.

FH: Maternal grandmother had coronary artery disease. She has no family history of diabetes or cancer. She has no known family history of depression or anxiety.

SH: Patient is currently unemployed. She lives in the Seattle area with her roommate. She is recently engaged, and states that she feels safe at home and with her fiancé. She describes him as loving and attentive and on questioning, denies that he has been emotionally, sexually, or physically abusive. She denies alcohol, tobacco, or drug use.

ROS:

CV: Negative
Resp: No history of asthma, history of TB at age 10, treated.
GI: Negative for diarrhea, constipation, hematochezia, or melena.
Musculoskeletal: Negative. No arthritis or muscle pains.
Endocrine: No history of diabetes, hyper – or hypo- thyroidism.
Heme: Negative for h/o blood clots or prolonged bleeding.
Neuro: Negative for seizures or strokes. Headaches once a month.
Psych: See HPI
Renal: Negative.
Female Reproductive: See HPI/Past Gyn History.

Physical Exam:

VS: BP 110/60, P 78, regular, RR14, Temp 36.6, Weight 116 lbs.
General: This is a pleasant 21 year old female. She is dressed appropriately for season and stated age. She is well groomed and appears well nourished and well hydrated. She makes appropriate eye contact with the examiner, though she turns away when speaking on certain subjects. Her affect has full range and is appropriate for subject matter. She appears subdued and is quiet through most of the history taking, thought she does appear excited when speaking of her recent engagement. She is alert and oriented to person, place, and time.
Skin: Normal texture, skin turgor, with lesion.
HEENT: Head: Normocephalic and atraumatic without lesion. Eyes: Full extraocular movement, PERRL. No scleral icterus, or pallor. Mouth and throat: Mucosa moist, pink without lesion. Gums pink without bleeding. Neck: Soft and supple with full range of motion.
CV: RRR without S3, S4, murmurs rubs or gallops
Resp: Clear to auscultation bilaterally without wheeze, rales or rhonchi.

Abdomen: Soft, non tender, without masses, hepatosplenomegaly. Bowel sounds heard in all 4 quadrants.
Extremities: Without cyanosis, clubbing, or edema. Capillary refill less than 2 seconds.
Neurologic: Cranial nerves II-XII intact. Good grip strength. NO involuntary movements. DTR's 2+ in all extremities. Normal gait without hesitation.
Breasts: Symmetric without palpable masses. Nipples without scarring or discharge. No axillary lymphadenopathy.
Genitalia: Normal female external genitalia without redness, sores or lesions. No inflammation or evidence of infection. Bartholin's and Skeene's glands are normal appearing, not inflamed or enlarged. NO vestibular point tenderness. Speculum exam reveals normal vaginal rugae without lesion. Cervix is nulliparous and without lesion. Pap smear and cultures for GC, CT were performed. Bimanual exam (per resident) reveals anteverted uterus without adnexal tenderness or palpable masses.
Rectal: Deffered.

Assessment:

1) 21 y.o. G0 presenting for establishment of care and well woman care. Patient desires STD/HIV testing at this time, as well as counseling on a method of hormonal contraception.
2) Questions of depression:
   DDx for her symptoms (lack of energy, lack of interest in previously enjoyable things, heightened sensitivity to criticism, lack of appetite and weight loss, and increased need for sleep):

Endocrine: Hypothyroidism
Psych: Major depression
Atypical depression
Dysthymic disorder
Bipolar disorder
Schizoaffective disorder
Psychosis secondary to depression
Heme: Anemia
Social: H/o or current emotional, physical or sexual abuse. EtOH Abuse
Neuro: Brain tumor
Iatrogenic: Medication

Major depression is at the top of my differential for her presentation. DSM IV criteria for diagnosing major depression require that a patient have fie of the following nine symptoms for at least two weeks, and that these be causing significant impairment in functioning:

1. Depressed mood most of the day, esp. in morning.
2. Markedly diminished interest or pleasure in almost all activities nearly every day (anhedonia); these can be indicated by the subjective account or observations by significant others.
3. Significant weight loss or gain
4. Insomnia or hypersomnia
5. Psychomotor agitation or retardation
6. Fatigue or loss of energy
7. Feelings of worthlessness or guilt
8. Impaired concentration, indecisiveness
9. Recurring thoughts of death or suicide

These symptoms cannot be caused by substances (med or other drugs), or by a medical condition such as hypothyroidism.

The patient has 8 of the above symptoms, for the duration of 1 year. She therefore fits the diagnosis of major depression, provided that she is not hypothyroid, anemic, and has not been using medications or drugs that could cause these symptoms. She denies that use of medications (other than a daily supplemental vitamin) and demise substance use. She has no other symptoms of hypothyroidism; her reflexes are 2+ in all muscle groups, she has not gained weight, her thyroid is normal in size and texture, and she denies feeling cold or having a personal or family history of thyroid disease. TSH and free T4 should be drawn to ensure that hypothyroidism is not missed, but it is lower on my differential given her history and PE findings.

Anemia is also lower on my differential. It would account for her tiredness and lack of energy, but not for other symptoms such as lack of interest in enjoyable things or feelings of worthlessness or guilt, or suicidal ideation. Also, since her anemia was diagnosed at age 17 and she has been taking iron supplementation since then, it is likely that it has been completed treated. On exam, she is not pale and her conjunctiva are pink. It is also unlikely that a long standing anemia since the age of 17 (4 years) would have its onset of symptoms only one year ago.

Dysthmia requires two years of low level depressive symptoms. Patient reports symptoms only for one year, so this can be rules out.

A brain tumor or neurologic abnormality can also be rules out since her neurologic exam was completely intact and there were no focal deficits.

Substance abuse and current physical, emotional, or sexual abuse can be ruled out as the patient states that she does use substances and that she is in a safe environment at home and with her fiancé. She also has no obvious signs of substance abuse or bruises and scars from physical abuse or forced sexual trauma on physical exam.

The other psychiatric diagnoses on the differential can be ruled out. Bipolar disorder can be ruled out because the patient has no history of mania, appears appropriately dressed, is subdued rather than excited during the majority of the interview, and has no history of going without sleep or sudden bursts of creativity. Schizoaffective disorder and psychotic depression can be ruled out because the patient has no history of psychotic episodes, and is alert and fully oriented during the interview and exam.

PLAN:

1. Health maintenance: Patient had a pap smear and cultures for GC/CT performed today, as well as blood drawn for HIV testing per her request/consent. Labs are also being drawn for Hct and TSH.
2. Contraception: Patient was given a prescription for OrthoEvra patch and directions for application.
3. Psych: Patient filled out a PHQ which demonstrated mild depressive symptoms without suicidal ideation at the present time. Fluoxetine 20 mg po qd was started at this time. Patient was informed that fluoxetine can cause activation and that her energy was likely to return before her mood. She was also counseled as to the side effects of this medication, and given the phone numbers for several area crisis hotlines.
4. Patient will return to clinic in two weeks time to follow up on her lab results as well as to take another PHQ and to see how she is doing with her depressive symptoms.