HUP MANAGEMENT OF ABNORMAL PREGNANCY: PUL Guidelines

Symptomatic first-trimester pregnancy

Viable intrauterine pregnancy: assess desiredness, provide appropriate referrals

Abnormal intrauterine pregnancy: see Early Pregnancy Loss Guidelines

Ultrasound

Ectopic pregnancy: see Ectopic Pregnancy Guidelines

Non-diagnostic/Pregnancy of Unknown Location: PUL Guidelines
Non-diagnostic / Pregnancy of Unknown Location

Consult done at HUP: Serial HCGs
Consult done at PPMC\(^1\): PPMC ED attg will call Gyn Pager (HUP) to add to QB and provide PEACE referral for in-person follow up

Normal rise\(^2\)

Likely normal IUP. Trend HCG until discriminatory level reached, then arrange ultrasound. Assess if pregnancy is desired or undesired, and offer appropriate referrals.

Abnormal rise or fall\(^2\)

Abnormal IUP vs ectopic pregnancy. Counsel patient and coordinate screening for ActOrNOT study (RCT of uterine aspiration, empiric methotrexate, or expectant management). Obtain MTX safety labs. \(^3\)

Normal fall\(^2\)

Likely abnormal IUP. Trend to undetectable HCG or and treat as clinically appropriate.

If patient is not a candidate for ActorNot, or declines participation, obtain MTX safety labs, and perform diagnostic UTERINE ASPIRATION\(^4\)

GS/Villi seen: send to pathology, repeat HCG in 24 hours. If >50% drop, diagnosis likely abnormal IUP, follow HCG to undetectable

GS/Villi not seen/equivocal

Send aspirate for rush pathology, repeat HCG in 24 hours. If <50% drop, diagnosis of ectopic pregnancy made: refer to Ectopic Pregnancy Guidelines

Address family planning needs
Resident Supervision

New patients seen in the HUP ED being entered onto the quant book should be staffed by the on-call gynecology attending. This includes any quant book referrals from PPMC. During the day, the service attending will staff quant book consults. Overnight, the gynecology covering attending staffs these consults. Overnight, if consults are non-emergent, they should be reviewed with the gynecology covering attending at 5:30am (or time agreed upon between overnight chief and attending). New quant book consults should be sent in Epic to be signed by the staffing gynecology attending.

Dr. Sonalkar’s role
--Twice weekly review of all quantbook patients with consult resident
--Aid in non-emergent management of patients with plateau in HCG
--Confirm when patients are to be discharged from the quantbook
--Assess/coordinate referrals to PEACE
--Ordering provider for follow up quants, ultrasounds or additional labs (placed after initial patient encounter)

Service/Night Gynecology Attending role
--Staff new consults
--Staff quantbook clinical emergencies

Ordering methotrexate

- If patient was only staffed by gyn service (not PEACE), gyn service attending should order methotrexate after detailed presentation from resident
- If patient was seen at PEACE for enrollment into ActorNot, Dr. Sonalkar or PEACE staff can order methotrexate
- When plan for methotrexate administration is made, document a note in the chart, use Epic Smartphrase .METHOTREXATENOTE (can be ‘stolen’ from Dr. Sonalkar). This note can also be used to document a patient’s symptoms on the day that they present to PEC or chemo suite for administration of methotrexate.

Referrals to PEACE

- Give patient the number to PEACE 215-615-5234 in their discharge instructions
- Use a telephone encounter to send a message to Janet Williams, PEACE Program Coordinator, with reason for referral
• Ensure patient receives has appropriate labs drawn at Perelman Lab prior to appointment, including HCG and methotrexate safety labs, to make her appointment at PEACE more productive

• If there is an urgent medical concern or clinical hand-off is needed, contact Family Planning NP Audrey Burlando, Family Planning Fellow Divyah Nagendra and/or Dr. Sonalkar as appropriate

Footnotes: Definitions/clarifications

1. At least one in-person evaluation should be done for all patients managed through the quant book. If patient is initially seen at PPMC by an ED attending, arrangements should be made with the patient to be seen in an outpatient setting at HUP within 48 hours, for example, at the time of the 2nd HCG blood draw. The PPMC ED attending will call the HUP Gyn Pager to add the patient to the quantbook, and provide referral information to PEACE to patient (215) 615-5234. The resident should route a telephone encounter to Natasha Seth and Janet Williams letting them know that this patient was seen at PPMC at needs follow up for PUL in clinic.

2. Definition of abnormal rise or fall: In viable intrauterine pregnancies with starting hCG level less than 10000 mIU/mL, the minimum expected rise in hCG over 48 hours is 53% based on a 99% confidence interval (Barnhart et al, Obstet Gynecol 104: 50-55, 2004; Seeber et al Fertil Steril 86, 454-459, 2006). In rare viable intrauterine pregnancies, the rise in hCG levels may be as low as 35%. However, 20% of ectopic gestations can produce an initial hCG pattern identical to that of an intrauterine pregnancy, so an important part of the diagnostic algorithm includes performing an ultrasound once the hCG level reaches the discriminatory cutoff (Silva et al, Obstet Gynecol 107; 605-610, 2006).

Abnormal rise is defined (conservatively) as the following

2 days 30% or less
3 days 50% or less
4 days 75% or less
5 days 100% or less
6 days 130% or less
7 days 166% or less

**Abnormal fall is defined as less than 50% fall between the first and last value**

3. As there is no clear consensus on standard of care for a pregnancy of unknown location, women should be encouraged to participate in the ActOrNot study. If patient has strong preference for treatment strategy, she can be randomized but then decline the assigned management arm.

If the patient declines participation in the study altogether, the standard of care for management of PUL is uterine aspiration. Please note that clinical judgment of the team based on the patient’s individual characteristics may also alter management strategies.

**To coordinate participation in ActOrNot,**

- Counsel women on workup and management of PUL, and that there is no clear consensus for management.
- Send CBC, T&S, methotrexate safety labs (CBC, BUN/Cr, AST/ALT, GGT, Total/Direct bilirubin, Alkaline Phosphatase, +/- coagulation panel, and CXR if history of pulmonary disease).
- Contact study coordinator to consent patient and for randomization.
- Location of consent and randomization is best coordinated at PEACE but can also be done in any clinical setting (ED, Dickens, REI).
- For appointments at PEACE,
  - Contact on-call family planning fellow, NP, or attending as appropriate for physician-to-physician hand-off and coordination of clinical care
  - Contact Janet Williams, for scheduling.
- Quantbook patients seen at PEACE should be covered by a resident for continuity of care, either the family planning resident on service or a gynecology resident team member

4. **Uterine aspiration:**
   - To be done at PEACE if during daytime hours and staff are available. To arrange expedited uterine aspiration at PEACE, contact on-call family planning fellow or attending for physician-to-physician signout, AND Janet Williams, for scheduling. The following should be completed prior to evaluation at PEACE.
     - Full H&P on patient (ED consult is appropriate)
     - Counseling for uterine aspiration (and consent if patient has been seen in person)
     - Appropriate labwork including T&S, and methotrexate safety labs (CBC, BUN/Cr, AST/ALT, GGT, Total/Direct bilirubin, Alkaline Phosphatase, +/- coagulation panel, and CXR if history of pulmonary disease)
Uterine aspiration in PEACE for quantbook patients should always be covered by a resident for continuity of care: either the family planning resident, or a gynecology resident.

- If unable to coordinate uterine aspiration at PEACE (weekend, staffing difficulties), then uterine aspiration can be done in ED, CAM, or main OR staffed by gynecology attending of the week and coordination with ActOrNot research team (if applicable).

5. Quantbook follow up guidelines:
   - Frequency of blood draws:
     i. **Likely SAB/falling quants**: every 48 hours x 3 quants, then weekly until zero (<5) or 97% drop from initial quant level
     ii. **Likely IUP/rising quants**: every 48 hours x 3 quants if rising appropriately (then can space out). Order ultrasound when quant approaches discriminatory zone (~2000)
   - **Ectopic pregnancy managed with methotrexate**
     1. Labs:
        a. Day 0 (dose #1 MTX): HCG, CBC, BMP, GGT, LFTs, (+- PT/PTT as clinically appropriate)
        b. Day 4 (dose #2 MTX): HCG
        c. Day 7: HCG, CBC, BMP, GGT, LFTs, (+- PT/PTT as clinically appropriate)
     2. MTX administered on days 0 and 4.
        a. If ≥15% drop in HCG from day 4 to 7, then quants weekly until zero (<5).
        b. If <15% drop in HCG from days 4 to 7, repeat methotrexate dose. Repeat monitoring pattern.
   - **Molar Pregnancy**
     i. HCG weekly until three consecutive weeks of zero (<5), then monthly for 6 months
   - **Lost to follow up letters (take to front desk in Dickens to be certified)**
     i. PUL:
        1. Initial certified letter 5 days after no show
        2. Termination letter 2 weeks after certified letter if no show
     ii. **Ectopic**:
        1. Initial certified letter 5 days after no show (can repeat prn)
        2. Termination letter 1 month after initial certified letter if no show
     iii. **Mole:**
1. Initial certified letter 5 days after no show (can repeat prn)
2. Termination letter 2 months after initial certified letter if no show