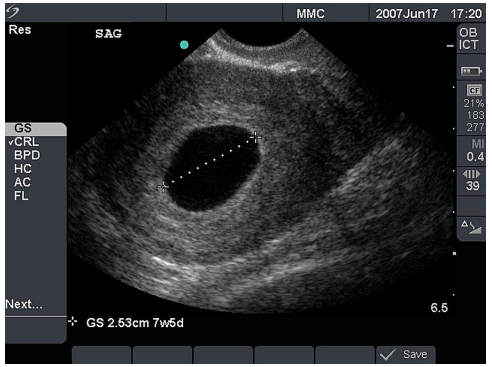
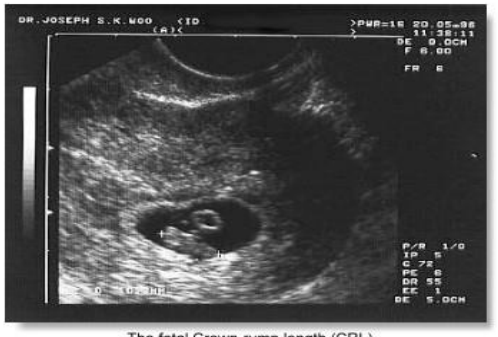
Part 1: EPL Evaluation and Diagnosis

Early Pregnancy Loss (EPL)

- 15-20% of clinically recognized pregnancies
- Includes all non-viable pregnancies in first trimester
- Synonymous with
  - Miscarriage
  - Spontaneous Abortion (SAB)





The fetal Crown-rump length (CRL)
In this case 10.8 cm = 7 weeks 3 days

EPL Presentation

- Urgent or emergency care visit
  - Vaginal bleeding
  - Abdominal or pelvic pain or cramping
  - Passage of pregnancy tissue from the vagina
  - Loss of pregnancy-related symptoms
- Incidental clinical finding
  - Bimanual exam inconsistent with LMP
  - Ultrasound suggestive of EPL

Patient Case: Presentation

Maya is a 26 yo G1P0 presenting to the emergency room.

> "I'm 2 months pregnant and I'm bleeding! Am I going to lose the baby?"

How do we care for Maya?

EPL Evaluation: Patient-Centered Approach

- Use open-ended questions and allow for silence.
- Inquire about pregnancy intention.
- Address feelings of guilt.
- Keep patient informed throughout the diagnostic process.

EPL Evaluation:
Open Communication During Diagnosis

"They **never said the word 'miscarriage,'** I did….I felt like I had to drag it out of them….I said….**what does that mean? What are the next steps?**"

EPL Evaluation: Exam and Diagnostics

- Physical exam
  - Vital signs
  - Abdominal and pelvic exam
- Ultrasound
  - Transvaginal preferred for diagnosis

EPL Evaluation: Exam and Diagnostics

- Labs
  - Hemoglobin or Hematocrit
  - hCG when indicated
  - Rh factor when indicated (>8 weeks gestation)[1]

Recurrent Pregnancy loss[2]

- Antiphospholipid Syndrome
  - anticardiolipin antibody (IgG and IgM)
  - lupus anticoagulant
- Hormonal and Metabolic
  - thyroid (TSH)
  - prolactin

[1]Wiebe et al 2019; Mark et al 2019, [2]ASRM 2012

Patient Case: H&P

- Maya's sure LMP was almost 8 weeks ago.
- They had a positive UPT in clinic 2 weeks ago.
- This is a desired pregnancy.
- Their first prenatal care visit is scheduled for next week (no ultrasound yet this pregnancy).
- Their bleeding is like a "light period" for the past 3 days.
- On exam their cervical os is closed.
- They remember from their 1st pregnancy being Rh-negative.

What can we tell Maya right now?

Bleeding in Early Pregnancy

- Keep the patient informed.
  - Provide reassurance that not all vaginal bleeding & cramping signifies miscarriage, but avoid guarantees that “everything will be all right”…
- What does the bleeding mean?
  - 50% ongoing pregnancy rate with closed cervical os
  - 85% ongoing pregnancy rate with cardiac activity in IUP
  - 30% of normal pregnancies have vaginal bleeding

EPL: Making the Diagnosis

1. Ultrasound confirmation
   - anembryonic gestation
   - embryonic or fetal demise
2. Absence of a previously seen IUP on ultrasound
3. Declining hCG levels and a clinical history consistent with EPL
4. Tissue confirmation of an expelled gestational sac

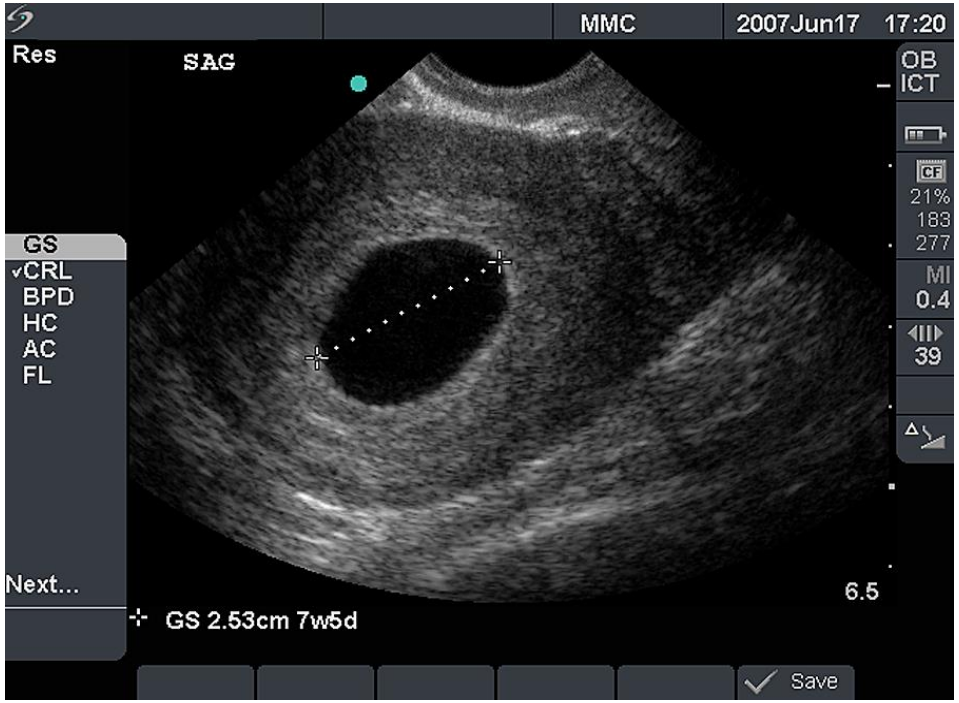
hCG Utility in EPL Diagnosis

- Discriminatory Level
  - Serum hCG at which a normal IUP can be visualized on ultrasound
  - Transvaginal threshold = 2000 – 3000 mIU/ml
- Appropriate decline after EPL completion
  - ~ 50% in 48 hours

Ultrasound Milestones

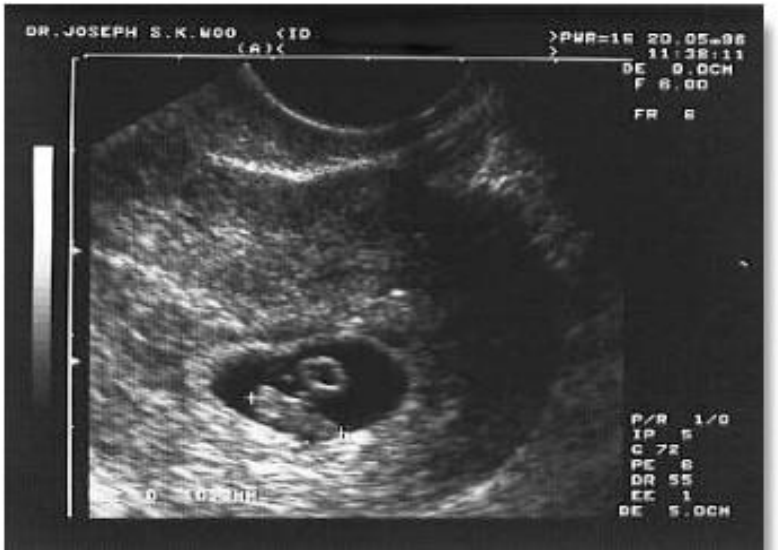
Normal IUP findings	When should you see it?	Abnormality if landmark is absent
Gestational Sac	Discriminatory Level hCG = 2000-3000	Completed EPL, Multiple gestation, Ectopic pregnancy
Yolk sac	MSD > 13-16 mm	Suspicious for EPL
Fetal pole	MSD ≥ 25mm (≥ 21 mm = 99% certainty)	Anembryonic gestation
Cardiac activity	CRL ≥ 7mm (≥ 5.3 mm = 99% certainty)	Embryonic demise
Interval growth (MSD or CRL)	1 mm/day (over 3-7 days)	Confirmed EPL

Anembryonic Gestation



Patient Case: Embryonic Demise

Maya's Ultrasound:



CRL = 10.8mm
EGA = 7 weeks + 3 days

EPL Management

- Four options for the clinically stable patient
  1. Aspiration w/ general/deep sedation
  2. Office-based Aspiration-- local/moderate sedation
  3. Medication (misoprostol +/- mifepristone)
  4. Expectant care
- All methods are effective, with equivalent safety and patient acceptability = **clinical equipoise**