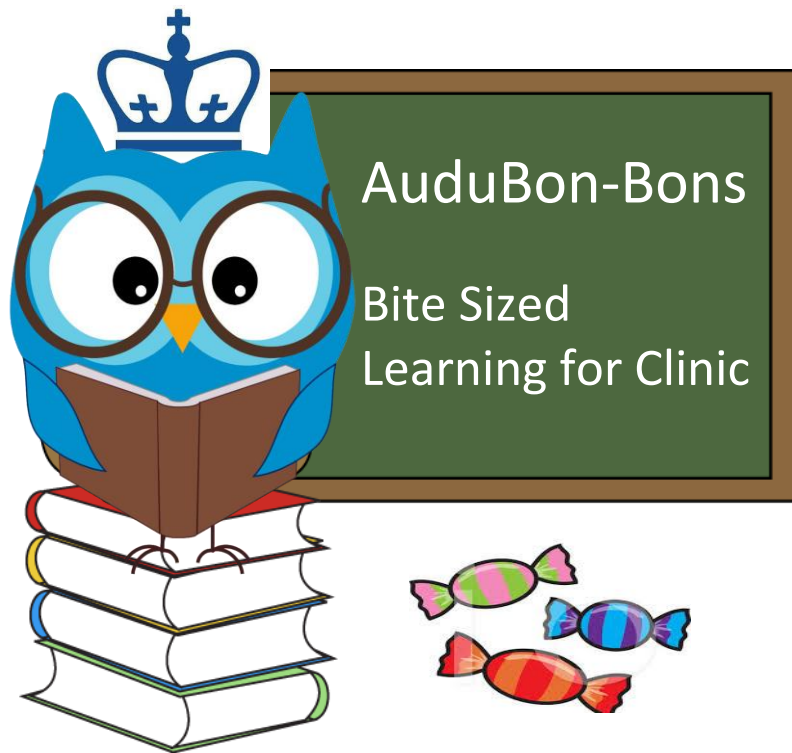


# FIRST TRIMESTER LOSS

Week 64



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With SDH and .phrase slides by Chloé Altchek,  
MS4

Reading Assignment:

*ACOG Practice Bulletin #200*

Early Pregnancy Loss

# LEARNING OBJECTIVES



- To diagnose first trimester pregnancy loss
- To counsel patients on the management options for first trimester pregnancy loss
- To educate patients on contraception use and attempting to conceive after first trimester pregnancy loss



# CASE VIGNETTE

- Ms. Poppy, a 28 yo woman, presents to clinic as a same-day patient because she has vaginal bleeding and thinks she may be pregnant



# FOCUSED HISTORY

## What elements of the patient's history are most relevant?

- **PMH:** Gastritis
- **PSH:** Liposuction
- **POBH:** Denies previous pregnancies, thinks she could be pregnant
- **PGYNH:** Irregular menses. Denies history of STIs or abnormal paps. Up to date on pap. Last STI screening 3 months ago. Sexually active with mutually monogamous male partner. Irregular condom use for contraception
- **MEDS:** Denies
- **All:** PCNs – rash
- **FH:** Mother osteoarthritis
- **SH:** Denies tob, drug, etoh use. Denies IPV. Works in retail. Accepts blood products



# PERTINENT PHYSICAL EXAM FINDINGS

**What elements of the patient's physical exam are most relevant?**

- **General:** Well appearing woman, VSS, **no pallor**
- **CV:** RRR
- **Resp:** CTAB
- **Abd:** Soft, ND, NT, no rebound or guarding
- **Vulva:** Normal external female genitalia. No lesions.
- **Vagina:** Pink, healthy mucosa. **~5mL dark blood in vaginal vault.**
- **Cervix:** **Closed os. No lesions. No active bleeding. No CMT.**
- **Uterus:** **NT. Anteverted. Not enlarged.**
- **Adnexae:** **NT. No masses palpable.**
- **Labs:** **UPT positive**
- **Bedside U/S:** **Anteverted uterus, +GS, +YS, +FP with CRL 9mm and no fetal heartbeat. Normal adnexa. No FF.**



# OVERVIEW OF FIRST TRIMESTER PREGNANCY LOSS

## What is the incidence of early pregnancy loss?

- **10%** of all clinically recognized pregnancies
  - **80%** of all cases of pregnancy loss occur in the first trimester

## What is the most common etiology of early pregnancy loss?

- **~50%** of cases are due to fetal chromosomal abnormalities

## What are the most common risk factors for early pregnancy loss?

- Advanced maternal age
- History of prior early pregnancy loss



# DIAGNOSIS OF FIRST TRIMESTER PREGNANCY LOSS

**Table 1. Guidelines for Transvaginal Ultrasonographic Diagnosis of Pregnancy Failure in a Woman With an Intrauterine Pregnancy of Uncertain Viability\***

Findings Diagnostic of Pregnancy Failure	Findings Suspicious for, but Not Diagnostic of, Pregnancy Failure <sup>†</sup>
Crown–rump length of 7 mm or greater and no heartbeat	Crown–rump length of less than 7 mm and no heartbeat
Mean sac diameter of 25 mm or greater and no embryo	Mean sac diameter of 16–24 mm and no embryo
Absence of embryo with heartbeat 2 weeks or more after a scan that showed a gestational sac without a yolk sac	Absence of embryo with heartbeat 7–13 days after a scan that showed a gestational sac without a yolk sac
Absence of embryo with heartbeat 11 days or more after a scan that showed a gestational sac with a yolk sac	Absence of embryo with heartbeat 7–10 days after a scan that showed a gestational sac with a yolk sac
	Absence of embryo for 6 weeks or longer after last menstrual period
	Empty amnion (amnion seen adjacent to yolk sac, with no visible embryo)
	Enlarged yolk sac (greater than 7 mm)
	Small gestational sac in relation to the size of the embryo (less than 5 mm difference between mean sac diameter and crown–rump length)



# MANAGEMENT COUNSELING

## What are the three management options?

- **Expectant** Management
- **Medical** Management
- **Surgical** Management

## How do the different management options compare for efficacy?

- For most patients, all are usually effective
- **Surgical** is fastest and most predictable with 99% efficacy
- **Medical** management is less effective with varying reported rates of efficacy from 81-93%
- **Expectant** management successful up to 80% of time when patients are given 8 weeks for expulsion

## How do the different management options compare for risks?

- Serious complications are rare and comparable among management
- **Surgical:** Clinically important adhesion formation is rare. Infection rate higher than expectant management, but overall infection risk low
- **Medical:** Drop in Hgb greater or equal to 3g/dL greater than in surgical management, but incidence of hemorrhage-related hospitalization is similar
- **Expectant:** Least effective, so higher risk of needing to move to different management method

## Which is the most cost-effective intervention?

- **Medical** management





# EXPECTANT MANAGEMENT

## Who are the best candidates for expectant management?

- Not appropriate for women with infection, hemorrhage, severe anemia, or bleeding disorders
- May be more effective in **symptomatic** women: those who report tissue passage
- **Incomplete abortion**

## What should patients expect with this method?

- Moderate to heavy bleeding, cramping

## What additional counseling is needed?

- **Pain medication**
- **Precautions** to call provider: bleeding (soaking 2 maxi pads per hour for 2 hours), fever, pain not controlled by medication provided, dizziness, loss of consciousness
- Surgical intervention may be necessary if complete expulsion is not achieved

## What is the commonly used criterion for complete expulsion of pregnancy tissue?

- **Absence of gestational sac** and endometrial thickness less than 30mm
- Surgical intervention is not required in asymptomatic women with only thickened endometrial stripe



# MEDICAL MANAGEMENT

## Who are the best candidates for medical management?

- Not appropriate for women with: infection, hemorrhage, severe anemia, or bleeding disorders
- Women who want to **shorten the time to expulsion, but want to avoid surgical evacuation**

## Why add mifepristone?

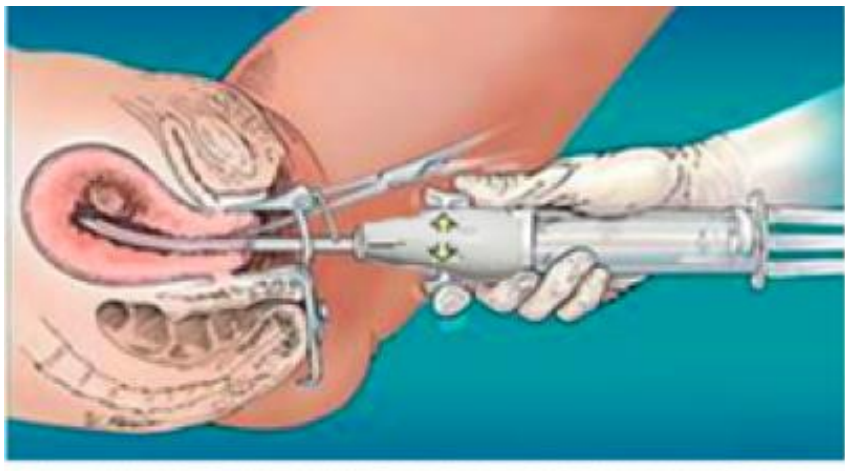
- In an RCT, complete expulsion occurred **83.8% with mifepristone pretreatment** compared to **67.1% without mifepristone pretreatment**

### Box 1. Protocol for the Medical Management of Early Pregnancy Loss

- Misoprostol 800 micrograms vaginally, with one repeat dose as needed, no earlier than 3 hours after the first dose and typically within 7 days if there is no response to the first dose\*
- A dose of mifepristone (200 mg orally) 24 hours before misoprostol administration should be considered when mifepristone is available.†
- Prescriptions for pain medications should be provided to the patient.
- Women who are Rh(D) negative and unsensitized should receive Rh(D)-immune globulin within 72 hours of the first misoprostol administration.
- Follow-up to document the complete passage of tissue can be accomplished by ultrasound examination, typically within 7–14 days. Serial serum  $\beta$ -hCG measurements may be used instead in settings where ultrasonography is unavailable. Patient-reported symptoms also should be considered when determining whether complete expulsion has occurred.
- If medical management fails, the patient may opt for expectant management, for a time determined by the woman and her obstetrician-gynecologist or other gynecologic provider, or suction curettage.

Early pregnancy loss. ACOG Practice Bulletin No. 200. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2018;132:e197-207.

# SURGICAL MANAGEMENT



## Who are the best candidates for surgical management?

- Patients with infection, hemorrhage, severe anemia, or bleeding disorders
- Patients with medical comorbidities including cardiovascular disease
- Patients who desire immediate completion with less follow up

## • What is the best method of curettage?

- Suction curettage
- Surgical management in office setting offers significant cost saving compared with the same procedure in the hospital

# FAMILY PLANNING AFTER FIRST TRIMESTER PREGNANCY LOSS

## When can you initiate contraception after first trimester pregnancy loss?

- **Immediately**, including IUD or implant insertion
- Do not place IUD if concern for septic abortion

## Is there an increased risk of expulsion of IUD placed after suction curettage for management of pregnancy loss?

- **Not clinically significant**
- At 6 months, risk of expulsion 5% versus 2.7% when placed 2-6 weeks postoperatively

## Should patients delay attempting conception after treatment for pregnancy loss?

- Pelvic rest for 1-2 weeks
- **No need to delay TTC**



# SOCIAL DETERMINANTS OF HEALTH

## Rate of spontaneous abortion and effects on subsequent pregnancies varies by race

- Black women have a 2-fold higher risk of spontaneous abortion than white women\*
- Black African and black Caribbean women with a history of spontaneous abortion have an increased risk in future pregnancies of preterm birth compared to white women \*
- Possible health issues implicated in these findings include:
  - higher rates of uterine fibroids and systemic lupus erythematosus in black women
  - greater risk of cervical insufficiency which would be compounded by any cervical damage arising from the surgical management of spontaneous abortion.

\* These differences are found even after correction for socioeconomic risk factors although residual systemic factors could remain after such an adjustment

Identifying black women with a history of spontaneous abortion as an at-risk group for preterm birth will allow for better surveillance and improved outcomes for preterm newborns



# Epic .phrase

## **BBonFirstTriPregLoss**

### Description: First trimester pregnancy loss management and counseling

We discussed diagnosis of first trimester pregnancy loss. Management options were discussed with the patient including the efficacy, risks and appropriateness of each.

Expectant: \*\*\*Given patient preference and her lack of infection, hemorrhage, severe anemia, or bleeding disorders the plan is to proceed with expectant management with follow-up ultrasound to confirm absence of gestational sac. Pt was counseled on risks including moderate to heavy bleeding, cramping, infection and need for surgical intervention if complete expulsion is not achieved. Pt was also counseled on what to expect while they pass pregnancy tissue, provided a prescription for pain medications, and advised to call provider if bleeding soaks 2 maxi pads per hour for 2 hours, fever, pain not controlled by medication provided, dizziness, or loss of consciousness. \*\*\* If late first trimester the risks of alloimmunization were discussed with the patient and Rh D immune globulin of \*\*\* micrograms was administered. Future contraceptive options were also discussed.

Medical: \*\*\* Given patient preference and the lack of infection, hemorrhage, severe anemia, or bleeding disorders, the plan is to proceed with medical management using 800 micrograms of vaginal misoprostol, with a repeat dose as needed and follow-up ultrasound to confirm complete expulsion. Pt was counseled on risks including moderate to heavy bleeding, cramping, infection, and need for surgical intervention if complete expulsion is not achieved. Pt was also counseled on what to expect while they pass pregnancy tissue, provided a prescription for pain medications, and advised to call provider if bleeding soaks 2 maxi pads per hour for 2 hours, fever, pain not controlled by medication provided, dizziness, or loss of consciousness. \*\*\* If late first trimester the risks of alloimmunization were discussed with the patient and Rh D immune globulin of \*\*\* micrograms was administered. Future contraceptive options were also discussed.

Surgical: \*\*\* Given presence of [infection/hemorrhage/severe anemia/bleeding disorders/CV disease] and patient preference, the plan is to proceed with surgical management with suction curettage. Pt was counseled on risks including moderate to heavy bleeding, cramping, infection, and more rarely intrauterine adhesion formation. Patient was provided a prescription for pain medication and advised to call provider if bleeding soaks 2 maxi pads per hour for 2 hours, fever, pain not controlled by medication provided, dizziness, or loss of consciousness.\*\*\* If Rh D-negative, risks of alloimmunization were discussed and Rh D immune globulin prophylaxis was administered. Future contraceptive options were also discussed.



# CODING AND BILLING

- **ICD-10 Code**

- 003.9

- Complete or unspecified spontaneous abortion without complication

- **CPT Code**

- 99214

- Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components:

- A detailed history; a detailed examination; medical decision making of moderate complexity.

- Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs.

- Usually, the presenting problem(s) are of moderate to high severity.

- Typically, 25 minutes are spent face-to-face with the patient and/or family.



# EVIDENCE

- Early pregnancy loss. ACOG Practice Bulletin No. 200. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2018;132:e197-207.
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- Mukherjee S, Velez Edwards DR, Baird DD, Savitz DA, Hartmann KE. Risk of miscarriage among black women and white women in a U.S. Prospective Cohort Study. *Am J Epidemiol*. 2013;177(11):1271-1278. doi:10.1093/aje/kws393

