Managing Early Pregnancy Loss: A Preference-sensitive Decision

Robin Wallace, MD, MAS
Clinical Assistant Professor
Department of Family & Community Medicine
University of Texas Southwestern
Part 2: EPL Management
Objectives

1. To describe and discuss the four evidence-based management options for early pregnancy loss (EPL)
2. To review guidelines for implementation of comprehensive EPL care in an office setting
EPL Management Options

• Four options for the clinically stable patient
  1. Aspiration w/ general/deep sedation (operating room)
  2. Aspiration w/ local/moderate sedation (office-based)
  3. Medication (misoprostol +/- mifepristone)
  4. Expectant care

• All methods are effective, with equivalent safety and patient acceptability = clinical equipoise

NSFG 2004; Chen 2007; Wieringa-de Waard, 2002; Zhang 2005; Trinder 2006
EPL Management: Patient-centered Care

- Choosing management is a preference-sensitive decision
- Comprehensive management options can be offered in a typical primary care or outpatient setting

Wieringa-de Waard 2002; Dalton 2006; Smith 2006
Early Pregnancy Loss (EPL) Management Principles

• Clinical checklist for outpatient care options
  – Clear diagnosis
  – Patient is stable
  – Access to phone & emergency care
  – Pain control options available
  – Anticipatory guidance for bleeding, S/Sx infection
  – Reliable follow-up
Patient Case: Embryonic Demise

- Maya’s sure LMP was 9 weeks ago
- She presented to ER with bleeding like a “light period” for the past 3 days
- This was a desired pregnancy
- TV ultrasound diagnosed an embryonic demise

CRL = 10.8mm, EGA = 7 weeks + 3 days
Patient Case: Management

How do we manage Maya?

• Use shared decision-making approach to choose best management option that aligns with her priorities and preferences.

• Step 1: Provide information about each option.
EPL – Natural History

Diagnosis*

1. Ultrasonography shows early anembryonic pregnancy or fetal death (missed miscarriage)
2. Vaginal bleeding occurs (threatened miscarriage)
3. Open cervical os (inevitable miscarriage)
4. Miscarriage (products of conception are expelled, and cramps and bleeding soon subside)
5. Ultrasonography may show uterine contents – decidua, blood, and some villi
Expectant Management

• “Watchful waiting”
• Proven safety up to 8 weeks
• Type of EPL affects expected efficacy
• Highly acceptable to patients with realistic expectations about:
  – Duration
  – Discomfort
  – Potential “D&C” (uterine aspiration)
“The doctor said that a natural miscarriage will come when you least expect it, at the wrong place, at the wrong time, and that's exactly what happened to me...[she] told me things that an actual person that went through it would tell you.”
Expectant Management

**Advantages**
- Non-invasive
- Body naturally expels non-viable pregnancy
- Avoids anesthesia and surgery risks
- Allows for patient privacy and continuity of care

**Disadvantages**
- Unpredictable outcome and timescale
- Process can last days to weeks
- Can have prolonged bleeding and cramping
- Despite waiting, may still need uterine aspiration
Expectant Management

Contraindications

- Uncertain diagnosis
- Suspected gestational trophoblastic disease
- Indicated karyotyping
- Severe hemorrhage or pain
- Infection
- IUD in place

Same contraindications for medication management
Medication Management

• Use of medications for active management of EPL
  • Misoprostol
    – Stimulates uterine contractions & softens cervix
    – Inexpensive, easy storage
  • Mifepristone
    – Anti-progestin used for pregnancy termination
    – Current research does not support routine use in non-viable pregnancies
Medication Management

Advantages
- More predictable and higher success rates than expectant care
- Highly cost-effective
- Non-invasive
- Avoids anesthesia and surgery risks
- Allows for patient privacy and continuity of care

Disadvantages
- Increased need for analgesics and pain control
- May cause heavier or longer bleeding
- May cause short-term gastrointestinal and other side effects
- May still need uterine aspiration
<table>
<thead>
<tr>
<th>Condition</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomplete miscarriage</td>
<td>400 mcg sublingually (SL)</td>
</tr>
<tr>
<td></td>
<td>- or - 600 mcg orally (PO)</td>
</tr>
<tr>
<td>All other types of EPL</td>
<td>800 mcg vaginally (PV) with</td>
</tr>
<tr>
<td></td>
<td>optional repeat dose 24-48</td>
</tr>
<tr>
<td></td>
<td>hours later if no initial</td>
</tr>
<tr>
<td></td>
<td>response</td>
</tr>
</tbody>
</table>
# Out-of-office EPL Management: Anticipated Success Rates

<table>
<thead>
<tr>
<th></th>
<th>Expectant Management</th>
<th>Medication Management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day 7 (%)</td>
<td>Day 14 (%)</td>
</tr>
<tr>
<td>Incomplete miscarriage</td>
<td>50</td>
<td>70-85</td>
</tr>
<tr>
<td>Other EPL: embryonic demise, anembryonic gestation</td>
<td>25-30</td>
<td>35-60</td>
</tr>
</tbody>
</table>

Adapted from Casikar 2010, Luise 2002, Ngoc 2013, Zhang 2005
## Medications for Symptoms and Side Effects

<table>
<thead>
<tr>
<th>Symptom Description</th>
<th>Recommended Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cramping</td>
<td>Ibuprofen 600 mg Q6 hrs or 800 mg Q8 hrs (or other NSAID)</td>
</tr>
<tr>
<td>Severe cramping pain not relieved by ibuprofen</td>
<td>Hydrocodone/APAP 5/500 or 5/325 Q 4-6 hrs prn</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
<td>Promethazine 25 mg Q 4-6 hrs prn or other anti-emetic</td>
</tr>
</tbody>
</table>
Medication Management: Practice Integration

- **Evaluation**
  - Exam, lab, or sono?
- **Medications**
  - Dispensed in clinic or Rx?
- **24 hour call service**
- **Back-up plan for aspiration**
  - Emergent vs. non-urgent
- **Follow-up plan**
Typical Follow-Up

- **Phone contact**
  - Call patient 1-2 days after first misoprostol dose to assess need for second dose

- **In-person visit**
  - 1-2 weeks after choosing expectant or medication management:
    - Confirm completion – sono or lab work
    - If not complete – alternate treatments or watchful waiting?
Aspiration for EPL

• Historically done in operating room under general anesthesia
• Terminology:
  – Surgical “D&C”
  – Suction curettage with MUA or EVA
• 97-100% success
Operating Room Aspiration

**Advantages**
- Can be asleep
- Predictable
- Offers fastest resolution of miscarriage
- Reduced duration of bleeding
- Low risk (<5%) of needing further treatment

**Disadvantages**
- Rare risks associated with invasive procedure and general anesthesia
- More cost than office-based procedures
- More time and physical exams than office-based procedures
- May be more bleeding complications under general anesthesia than in office-based procedures
Office-based Aspiration

Advantages

• Pain control with local plus oral or IV meds
• Predictable
• Offers fastest resolution of miscarriage
• Reduced duration of bleeding
• Low risk (<5%) of needing further treatment

Disadvantages

• Rare risks of invasive procedure
• Less pain control options in some settings

Compared to OR management:

• May allow improved patient access and continuity of care
• Improved privacy
• Less patient and staff time
• Resource and cost savings
Patient Case: Information Exchange

• Chance of success for embryonic demise:
  – Expectant: 1 week (30%)
    2 weeks (60%)
    6 weeks (75%)
  – Misoprostol: 1 week (84%)
  – Aspiration (office or OR): 97-100%

• Maya prioritizes a quick resolution to her miscarriage but would like to avoid having a procedure
Patient Case: Management

- Maya chose to use misoprostol at home
- She placed the pills vaginally and began having cramping and bleeding 2 hours later
- Her heavy bleeding lasted 4 hours, and she noticed one particularly large clot, that may have had tissue in it
- She still has some light bleeding at her follow-up appointment, 7 days later

How do we confirm success of treatment?
Vaginal Ultrasound

“Treat the patient, not the ultrasound...”
EPL Management: Follow-up

• Use both history and exam to confirm completion
  – B-hCG drop >50% or negative UPT
  – Vaginal ultrasound (absence of gestational sac)
  – Tissue confirmation after aspiration

• Address fertility
  – Contraception vs prenatal vitamins

• Offer grief counseling follow-up or referrals
EPL Management: Summary

• Four treatment approaches are safe and acceptable for EPL care: expectant, medication, and uterine aspiration in an office or operating room setting.

• Choice of EPL management is a preference-sensitive decision.

• Primary care providers are capable of comprehensive in-office EPL management.
Managing Early Pregnancy Loss is an educational initiative incorporating a video-based curriculum with online resources to support an evidence-based and patient-centered approach to miscarriage management.

Welcome to Managing Early Pregnancy Loss

Read more here about the curriculum before you begin. Items marked with an * are required for CME credit.

Evaluation and Diagnosis of Early Pregnancy Loss*

The first chapter reviews a methodical approach to evaluate patients who present with symptoms of or concerns for EPL. Diagnostic guidelines for use of ultrasound and laboratory markers are reviewed.

Clinical Scenario #1: Patient-centered Counseling in EPL Evaluation

During a visit with a patient who has been experiencing bleeding, the exam is concerning for possible early pregnancy loss. This video first demonstrates common mistakes in provider communication, followed by recommendations for a patient-centered counseling approach. With shared decision-making techniques this patient chooses expectant management.

Evaluation and Diagnosis Quiz

Contents

1. Welcome to Managing Early Pregnancy Loss
2. Evaluation and Diagnosis of Early Pregnancy Loss*
3. Counseling for EPL Management Options*
4. Expectant and Medication Management for EPL*
5. Uterine Aspiration for EPL*
6. Practice Integration of EPL Services*

feedback
managing early pregnancy loss

Explore the EPL resource page and link to an online learning module:

www.earlypregnancylossresources.org