NCTCFP
NATIONAL CLINICAL TRAINING CENTER FOR FAMILY PLANNING

Clinical Protocol Template
Early Pregnancy Pain and Bleeding

This template protocol is intended to assist family planning providers in developing and/or updating local, service site-specific, protocols for assessment, management, and triage of pain and bleeding during the first trimester (up to 12 weeks 6 days gestation) of pregnancy in family planning settings. If your organization decides to use this template protocol, the author will tailor the contents to their own organization and create a local protocol. Decision points are listed as NOTE alerts throughout the template document. It is expected that the person(s) using the template protocol as a starting point will include the appropriate option that reflects their organization's current practices. If the organization has policies, procedures, or practices that are not listed as an option, they should be described in detail and inserted into the draft local protocol. When formatting the draft local protocol, the options that do not apply to the organization should be deleted.

This protocol does not include guidance related to the management of early pregnancy failure or ectopic pregnancy. Clients with these diagnoses should be referred to an Obstetrics/Gynecology (OB/Gyn) care setting for further management.

Introduction

Name of Setting _____ offers the following services:

- ☐ Assessment for pain and bleeding during early pregnancy.
- ☐ Referral for pain and bleeding during early pregnancy.

NOTE: If your site does not offer these services, list where clients should be referred internally or in the community.

Early Pregnancy Pain and Bleeding

Healthcare visits for first trimester pregnancy-related symptoms are common. Evaluation and management are guided by the same principles as any other healthcare encounter:

- ☐ Assess and address the client's goals
- ☐ Recognize acutely dangerous pathologies
- ☐ Offer symptomatic improvement for benign presentations
- ☐ Provide anticipatory guidance

Please note this protocol template is intended for evaluation in the first trimester only. The first trimester is defined as less than 12 weeks and 6 days gestation from the start of the last menstrual period. The term "early pregnancy" throughout the protocol refers to the first trimester. For clients seeking care for these issues beyond 12 weeks and 6 days, they should be referred to their prenatal provider or an emergency department.

Significance of Pain and Bleeding in Early Pregnancy

Pelvic and/or abdominal pain and vaginal bleeding are common in early pregnancy. The most frequent causes are benign and do not require intervention, though some clients may request treatment for symptomatic improvement. Clinicians should look for any rare pathologies that can be acutely dangerous and may require emergency department care.

History

Demographics

- ☐ Age
- ☐ Gender Identity

Relevant Past Medical History

- ☐ Pregnancy history (gravidity, parity, prior delivery routes, history of hemorrhage, history of prior ectopic)
- ☐ Recent sexual history
- ☐ Chronic medical conditions (history of bleeding disorder, current anticoagulation)
- ☐ Prior abdominal or pelvic surgeries
- ☐ Menstrual history (cycle interval)
- ☐ Current medications and allergies
- ☐ History of contraception (IUD currently in place, history of sterilization procedure)
- ☐ History of pelvic inflammatory disease or tubo-ovarian abcess

Assessment of Gestational Age (GA)

- ☐ Last menstrual period (1st day of flow, not spotting)
- ☐ First positive pregnancy test
- ☐ Estimated date of conception
- ☐ Prior ultrasounds during this pregnancy (estimated due date or gestational age at time of ultrasound)
- ☐ Physical exam: fundal height (usually palpable halfway to umbilicus at ~16 weeks, and at umbilicus at ~20 weeks)

Relevant History of Present Illness

- ☐ Pain location (upper abdominal vs. lower/ pelvic)
- ☐ Pain severity (mild, moderate, severe)
- ☐ Pain improvement with medication (e.g., acetaminophen)
- ☐ Bleeding source (rectal vs vaginal vs urinary)
- ☐ Pregnancy Goals*
- ☐ Bleeding quantification (how many pads/ tampons per hour have been saturated, for what duration of time, clot size)**
- ☐ Other associated symptoms (anorexia, nausea/vomiting, constipation, diarrhea, dysuria, fever)

*Pregnancy goals are important for patient counseling. Given some state restrictions surrounding abortion care, reassurance about patient safety and discretionary documentation in the medical record should be considered.

**Any patient calling with severe pain unresolved with acetaminophen or vaginal bleeding saturating 2 or more pads per hour for 1-2 hours should be referred directly to the emergency department.

Physical Exam

- ☐ Vital signs (BMI, pulse, blood pressure, temperature)
- ☐ Abdominal exam (tenderness, rebound, guarding, assessment of fundal height if GA unknown
- ☐ Speculum exam – indicated in assessment of vaginal bleeding (quantification of blood in vaginal vault, inspect for vaginal trauma, cervical ectropion or cervical polyp with friability, mucopurulent cervicitis)
- ☐ Bimanual exam (adnexal or uterine tenderness, cervical exam typically not indicated)
- ☐ Rectal exam if hemorrhoids or GI bleeding suspected

NOTE: Any patient presenting with hypotension, tachycardia, severe pain, brisk vaginal bleeding, or fever associated with any of the aforementioned findings should be referred to the emergency department.

Laboratory

Human Chorionic Gonadotropin (hCG) Values

A single quantitative hCG value is not diagnostic. A trend of hCG values drawn every 48 hours is necessary to make diagnostic conclusions. Time frames shorter or longer than 48 hours may provide additional data points but may not yield definitive diagnosis.

A normal rate of hCG rise indicates a normal, intrauterine pregnancy. An abnormal rate of rise indicates an abnormal pregnancy, which can either be intrauterine or ectopic.

Calculating a Rate of Rise

$$\left(\frac{[2nd\ hCG\ Level] - [1st\ hCG\ Level]}{[1st\ hCG\ Level]}\right) \cdot 100 = \textbf{Rate of Increase}$$

Initial hCG Level	Normal Rate of Increase
< 1500 miU/mL	49%
1500 - 300 miU/mL	40%
> 3000 miU/mL	33%

After a pregnancy loss (either spontaneous or induced), an absolute threshold for expected hCG drop is not known. A drop of >50% within the first 3-7 days is highly suggestive of a completed pregnancy loss.

A pregnancy is typically visualizable on **transvaginal** ultrasound when hCG levels reach 1500 – 3500 mIU/mL. (Range is dependent on sonographer skill and ultrasound machine capability).

hCG is less than < 1500 mIU/mL	Trend hCG until 1500 mIU/mL and then obtain ultrasound
hCG >1500 mIU/mL	Ultrasound

When serum quantitative hCG assessments are not readily available, urine pregnancy tests can be utilized to guide evaluation. A positive low-sensitivity pregnancy test (LSPT) signifies a transvaginal ultrasound will likely identify the pregnancy location.

hCG Threshold for Positive Result

Low Sensitivity Pregnancy Test (LSPT)	1500-2000mIU/mL
High Sensitivity Pregnancy Test (HSPT)	25-30mIU/mL

NOTE: Rh testing and RhoGAM administration is no longer recommended for vaginal bleeding or early pregnancy expulsion in pregnancies less than 12 weeks gestation.

Ultrasound and Doppler Assessments

In normal pregnancy development, the following timelines demonstrate what is typically visualizable on transvaginal ultrasound

5 Weeks	Gestational Sac
6 Weeks	Gestational Sac + Yolk Sac
7 Weeks	Gestational Sac + Yolk Sac + Fetal Pole with Cardiac Activity

Findings Diagnostic of Pregnancy Failure

- Crown-rump length of ≥ 7mm and no heartbeat
- Mean sac diameter of ≥ 25 mm and no embryo
- Absence of embryo with heartbeat ≥ 2 weeks after a scan that showed a gestational sac without a yolk sac
- Absence of embryo with heartbeat ≥ 11 days after a scan that showed a gestational sac with a yolk sac
- Ultrasound findings, together with menstrual/conception history and clinical presentation, should be used to aid in a diagnosis of early pregnancy failure.

Doppler assessment can be utilized in lieu of an ultrasound to detect cardiac activity in clients >10 weeks gestational age (GA). BMI or body habitus and uterine position, however, can limit this assessment, and inability to hear cardiac activity with doppler should prompt ultrasound evaluation.

Assessment/Diagnosis

Nonemergent/Benign Causes of Pain or Bleeding in Early Pregnancy (Most Common)

- Vaginal or cervical causes (micro-fissures from intercourse, cervical ectropion, cervical polyp, sexually transmitted infection(s))
- Bladder or bowel causes (urinary tract infection, constipation, or hemorrhoids)
- Round ligament pain or musculoskeletal pain
- Subchorionic hematoma, disruption of decidual vessels, early pregnancy loss (miscarriage)

Emergent/Dangerous Causes of Pain or Bleeding in Early Pregnancy (Less Common)

- Incompletely evacuated early pregnancy loss with hemorrhage or infection
- Ectopic pregnancy (can be unruptured or ruptured)
- Other intraperitoneal etiologies (appendicitis, cholecystitis, pancreatitis, perforated ulcers, ovarian torsion)

NOTE: Suspicion of any of these emergent/dangerous causes should warrant referral to OB/Gyn care or emergency department.

Plan of Care

Vaginal/cervical causes of bleeding are typically self-limiting. No intervention is indicated. These do not typically increase risk of early pregnancy loss.

Bladder causes: Antibiotics for suspected UTI. Avoid nitrofurantoin and trimethoprim-sulfamethoxazole for first line antibiotic treatment of a UTI given unclear associations with congenital anomalies in the first trimester. First line options include amoxicillin-clavulanate and cephalexin. Other safe options include fosfomycin and cefpodoxime.

Bowel causes: Stool softeners/laxatives (docusate (brand name Colace®), senna (brand name Senokot®), or polyethylene glycol (brand name Miralax®) for constipation)

Round ligament pain or other musculoskeletal pain: oral acetaminophen, oral cyclobenzaprine, or lidocaine patches can be used for symptomatic improvement. Educate client that round ligament pain is associated with uterine growth. Non-pharmacologic symptom relief/client education includes instructions for changing positions slowly, which helps to gently stretch ligaments; flexing the hips before coughing, sneezing, or laughing to cut down on ligament strain; avoiding prolonged sitting, standing, or inactivity; and avoiding rapid or repeated movements.

Any patient with a pregnancy of unknown location should have an urgent ultrasound evaluation. High sensitivity pregnancy tests (HSPT) and low sensitivity pregnancy tests (LSPT) can help determine timing of ultrasound. Any patient with pain or bleeding without confirmed intrauterine pregnancy should have quantitative hCG values trended and followed closely until a diagnosis can be made.

Clients with abnormal hCG value trends who are clinically stable should be referred to OB/Gyn care for management. Any clinical instability should be referred directly to the emergency department.

Completed early pregnancy loss: clients with confirmed passage of an early pregnancy should be offered confidential, client-centered counseling related to their reproductive goals (achieving healthy pregnancy or preventing pregnancy), as desired.

Suspicion of any of the emergent/dangerous etiologies warrant immediate referral to OB/Gyn care or to the emergency department.

Client Counseling and Education

Clients without a confirmed pregnancy location should be informed that the process of determining pregnancy location can take several days and require multiple blood draws and ultrasounds.

Clients should be educated that, if an ectopic pregnancy is present, risk of rupture exists throughout the duration of the pregnancy, and precautions regarding emergency department presentation for severe abdominal pain and/or heavy bleeding should be reviewed.

If an intrauterine location is confirmed, clients should be counseled that mild to moderate pain and light bleeding are common and almost never dangerous. Precautions regarding emergency department assessment and management for saturating 2 or more pads/hour for 1- 2 hours should be reviewed.

Early pregnancy failure requires ultrasound or down-trending serial hCG levels for diagnosis. Clients should be counseled that no interventions are known to prevent early pregnancy loss, and any concerns/suspicions are typically managed by watchful waiting and repeat ultrasounds.

Clients with complete passage of an early pregnancy loss will often continue to have light to moderate vaginal bleeding for approximately 2 weeks following passage of the pregnancy. They should be counseled that subsequent periods may be irregular, and that another pregnancy is possible prior to having a period. No specific time interval until a subsequent pregnancy is supported by evidence.

Clients with 3 early pregnancy losses who are seeking a subsequent pregnancy should be referred to OB/Gyn care for evaluation of recurrent pregnancy loss.

References

ACOG Practice Bulletin #200: Early Pregnancy Loss. Committee on Practice Bulletins—Gynecology . This Practice Bulletin was developed by the ACOG Committee on Practice Bulletins—Gynecology in collaboration with Sarah Prager, MD; Vanessa K. Dalton, MD, MPH; and Rebecca H. Allen, MD, MPH.

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