

## Early pregnancy loss management for nurse practitioners and midwives

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**E**arly pregnancy loss (EPL), or miscarriage, is a common phenomenon in pregnancy; up to 30% of pregnancies result in miscarriage in women who have identified themselves as being pregnant.<sup>1</sup> Various treatment modalities can be used to assist women who have experienced EPL, including expectant management, pharmacologic treatment, and vacuum aspiration. Patients should be assessed for their preferences for management of EPL based on their priorities for care. The role of the nurse practitioner or midwife in counseling women who have experienced EPL is to help them manage symptoms, resolve the passage of tissue, and cope with the emotional experience of losing a pregnancy.

Early pregnancy loss (EPL), or miscarriage—the spontaneous loss of a pregnancy before 13 weeks' gestation<sup>1</sup>—is a devastating problem for women who lose a highly desired pregnancy. In addition to the emotional turmoil caused by the interruption of a wanted pregnancy, these women are faced with managing the physical reality of resolving a nonviable gestation. Nurse practitioners (NPs) and midwives are frequently the first providers to encounter women who have bleeding early in an already-diagnosed pregnancy. In addition to providing much needed emotional support and compassion, providers can help women and their families move through the steps of completing the process of EPL.

Most bleeding in pregnancy is the result of a disruption in the complex processes associated with implantation, including the formation of the decidua and the actual burrowing of the blastocyst into the uterine lining.<sup>2</sup> Bleeding in the first trimester occurs in up to 40% of pregnancies; more than half of these pregnancies progress normally, with preterm delivery and low birth weight as possible outcomes.<sup>2</sup> Al-



though cervical polyps or friability, vaginal laceration, irritation, or neoplasm may also lead to bleeding in early pregnancy, the possibility of pregnancy loss or ectopic pregnancy must always be considered.<sup>3</sup>

### Causes of early pregnancy loss

The three main causes of problematic bleeding leading to EPL are spontaneous abortion, ectopic pregnancy, and gestational trophoblastic disease (GTD).<sup>1</sup> Ultrasound guidance and serum hCG assessment can assist in the diagnosis of ectopic pregnancy and GTD and in the assessment of pregnancy viability.<sup>3</sup> Once ectopic pregnancy and GTD have been ruled out, the problematic bleeding can be classified as a threatened abortion, an incomplete abortion, or a complete abortion. A threatened abortion occurs when vaginal bleeding occurs in the absence of cervical dilatation; 30%-50% of women with these symptoms go on to have a complete abortion.<sup>3</sup> An incomplete abortion is diagnosed when some fetal or embryonic tissue remains in the uterus. A complete abortion reflects the passage of all pregnancy tissue.

### Management of early pregnancy loss

The focus of EPL management is on meeting the needs of each individual woman. After establishing that the patient is clinically stable, the provider should offer appropriate emotional support; regardless of whether or not the pregnancy was planned, the woman is experiencing the loss of the pregnancy and maybe a change in her sense of self. The provider should establish the meaning of the pregnancy for the woman, and recog-

nize that her management options for resolving the EPL should be guided by her medical needs and by her self-identified needs and preferences.

One way to assess the needs and preferences of a woman experiencing an EPL is to ask her these questions: What are your priorities related to the timing and cost of the process? What is your previous experience with miscarriage and/or abortion? How do you feel about taking medications or undergoing a procedure, either in the office or the hospital? How do you assess your own ability to manage the pain and bleeding that you will experience?<sup>4</sup> Her responses to these questions can guide the provider in helping her choose how to resolve the EPL.

Early pregnancy loss can be resolved in one of three ways: expectant management (watchful waiting); medication management to complete the process of uterine evacuation; or an aspiration procedure to empty the uterus, either in an inpatient or outpatient setting.<sup>4</sup> Each approach has benefits and minimal risks. These approaches vary slightly in terms of efficacy, depending on how much tissue remains inside the uterus. All of these approaches are considered acceptable and should be offered to women experiencing EPL. However, if a woman presents with heavy bleeding or is medically unstable, the situation requires immediate resolution; her preference for expectant management or medication management cannot be honored because neither is a safe option.

### **Expectant management**

In 85% of cases, EPL resolves with expectant management within 2 weeks of the first signs and symptoms (S/S) of miscarriage. Within an additional 2 weeks, 10% of the remaining cases resolve. Aspiration intervention is recommended for the resolution of pregnancies that continue after 4 weeks of bleeding.<sup>5</sup> A woman who chooses expectant management must be counseled about the possibility of a prolonged period of waiting for resolution, as well as what to expect when she finally passes the pregnancy tissue. She may experience a short period of intense cramping and bleeding, followed by mild bleeding and/or spotting for up to 2 weeks. During this period of time, she needs to monitor her temperature and report any

S/S that would indicate infection, such as a malodorous discharge or flu-like S/S. The provider should ascertain the woman's ease of access to emergency resources if needed and encourage follow-up within 2 weeks of the passage of tissue to ensure that the pregnancy has been completely resolved.

Many women choose expectant management because it does not require any intervention, and can generally be experienced privately and without any increased cost or provider visits. However, they need to understand that they may see the pregnancy tissue and they may have considerable pain and bleeding with this option. In addition, they must have ready access to care if bleeding becomes excessive.

### **Medication management**

Use of medications can enhance the speed with which the pregnancy tissue is passed. The most widely used medication for this purpose is misoprostol, a prostaglandin antagonist that has a variety of off-label obstetric and gynecologic uses in addition to its FDA-approved indication for the prevention of gastric ulcers and as part of the medication abortion regimen.<sup>6</sup> Misoprostol causes cervical softening and uterine contractions that accelerate passage of the pregnancy tissue, producing the same symptoms as expectant management but within 24-48 hours of administration of the medication. Use of misoprostol to accelerate resolution of EPL is successful in about 90% of cases after two doses.<sup>7</sup> Women should be counseled to expect the same S/S as with expectant management, but within a shorter time period. If no tissue passes, and increased bleeding does not occur, women should return for an assessment of retained products of conception. Misoprostol users should also have access to analgesics, and they should be aware of potential side effects: fever, nausea, diarrhea, and/or shaking. Over-the-counter medications can be used to treat fever and gastrointestinal side effects, and application of warm blankets can reduce shaking.

### **Aspiration management**

An aspiration procedure may be the choice of women who prefer an expedient and closely managed process for resolution of the EPL. If ultrasound dating

shows a gestational age of less than 12 weeks 6 days, uterine evacuation can be performed in an outpatient clinic or ambulatory surgical center. In some places, aspiration procedures can be performed only in a hospital, but this approach consumes more resources and has not been shown to improve outcomes.<sup>8</sup> In these circumstances, providers should counsel women about other settings in the community that offer outpatient management services and facilitate their obtaining care if they choose an outpatient procedure.

Aspiration management provides clear advantages for a woman who prefers to have a procedure that can be scheduled, has a limited impact on the amount of time before normal activities can be resumed, and during which she can receive additional pain management. Uterine evacuation with either a manual or electric vacuum procedure is highly successful but does carry minimal risks of infection, uterine perforation, cervical trauma, or damage to the endometrium.<sup>9</sup>

## Resources

Various resources are available to NPs and midwives to help counsel women facing a decision about how to manage an EPL. **TEAMMA**<sup>A</sup> (Training, Education & Advocacy in Miscarriage Management), a project of the Department of Obstetrics and Gynecology at the University of Washington, provides educational materials and training for practitioners and educational materials for women about outpatient manual vacuum aspiration.<sup>10</sup> The University of California San Francisco's website, **Innovating Education in Reproductive Health**<sup>B</sup>, has information about managing EPL, including a video and patient education materials for decision making following EPL.<sup>11</sup>

## Conclusion

Early pregnancy loss can be a devastating experience for a woman, but the compassion and understanding of her provider can assist her in identifying the safest and most satisfying way for her to resolve her physical S/S while she is processing her emotional experience. Whether a woman chooses an inpatient or outpatient

procedure, takes medication, or elects to wait for the natural course of miscarriage to occur, reviewing all the possibilities for resolution is an important part of the NP's or midwife's responsibility in caring for women who are undergoing an EPL. ●

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11. Innovating Education in Reproductive Health. Early Pregnancy Loss. [innovating-education.org/abortion101/clinical-practice/early-pregnancy-loss/](http://innovating-education.org/abortion101/clinical-practice/early-pregnancy-loss/)

## Web resources

- A. [depts.washington.edu/obgyn/education/miscarriagemanagement.html](http://depts.washington.edu/obgyn/education/miscarriagemanagement.html)
- B. [innovating-education.org/course/early-pregnancy-loss/](http://innovating-education.org/course/early-pregnancy-loss/)

**VIEW: Innovating Education<sup>B</sup>**

