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Options for first-trimester abortions

Clinicians need to stay up-to-date with medication and access issues.

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In the United States, most abortions occur early in pregnancy; in 2020, approximately 93% occurred under 13 weeks' gestation, with medication abortion accounting for 51% of all abortions.[1] Individuals will continue to seek abortion care even in restrictive settings.[2] As access to abortion care and training becomes even more suppressed following recent political shifts, education for both patients and providers is critical.

Individuals who graduate from residency programs with opt-out abortion training are much more confident with performing uterine aspiration for induced abortion, early pregnancy loss, and incomplete abortions.[3] Knowing how to remove pregnancy tissue from the uterus is an essential skill for an obstetrician-gynecologist, even if the physician does not intend to provide abortions in their practice.

In this article, we review first-trimester abortion options, recommended preprocedure considerations, pain management, and special considerations if access to medications continues to decrease nationwide.

Counseling

When talking with a patient about early pregnancy options, start by simply asking the patient's feelings about being pregnant. When patients indicate they are considering an abortion, the clinician who is not comfortable or equipped to provide the services should promptly ensure appropriate referral. Providers who conscientiously refuse to refer for unbiased care have a duty to inform patients of their personal moral constraints.[4-6] Timing is crucial because methods can vary and specific state regulations prohibit care after a certain point in the pregnancy.

If a patient is a candidate for both medication and procedural abortion, the decision of which method should be an integral component of counseling. A medication abortion allows the patient to control the start of the process, avoids a possible pelvic exam and medical procedure, and allows them to be at home with their support system. A suction aspiration procedure takes place in a clinical setting, has the option of anesthesia during the process, and offers quick and timely completion. Facilities may have options ranging from an office procedure with local anesthesia or moderate sedation to an operating room with deep sedation. When deciding on the method, topics to discuss include bleeding, pain, and possible complications.

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Table 1. Misoprostol Regimens for Cervical Preparation Before First-Trimester Procedural Abortion[21]

Route	Dosage	Timing prior to procedure
Vaginal	400 mcg	3-4 hours
Sublingual	400 mcg	2-3 hours
Buccal	400 mcg	1-2 hours

Preabortion assessments

Gestational age can be determined by a certain last menstrual period, uterine examination, or ultrasonography if there is a clinical indication, such as an unsure last menstrual period.[7] Routine laboratory assessments are not indicated. Even in patients with concerns for significant anemia or underlying medical conditions, clinical judgment can be used to decide if preprocedure testing is necessary. The typical blood loss with an early aspiration procedure is low and a blood count assessment generally is not needed. For any patient at 12 weeks' gestation or less, blood type and screen are also not indicated. Alloimmunization risk is so low in this gestational age range that the World Health Organization and the Society of Family Planning both recognize that Rh-immunoglobulin is not needed for Rh-negative patients at 12 weeks or less.[7,8] For patients having a first-trimester procedure at more than 12 weeks, Rh-immunoglobulin 100 mcg is all that is needed.[7]

The use of universal prophylactic antibiotics prior to a first-trimester procedural abortion is recommended. In the United States, pelvic infection following an abortion occurs in less than 1% of patients.[9-11] A variety of regimens demonstrate efficacy in reducing postabortal infections using doxycycline, metronidazole, or azithromycin, or a combination. More than 80% of providers use doxycycline.[12] A well-proven regimen is 100 mg within a few hours prior to the procedure followed by a 200-mg dose with the next meal after the procedure.[13] However, for patients with significant nausea and vomiting, a 200-mg dose the night prior to procedure with a meal results in decreased nausea with similar drug levels at the time of the procedure.[14] There is no indication for antibiotic prophylaxis with medication abortion.[15]

Procedural abortion

First-trimester suction aspiration can be safely performed in an office setting with manual or electric vacuum aspiration. In clinical studies, participants experience similar amounts of pain and low rates of complication with either technique.[16,17] Manual vacuum aspiration is associated with less noise, which may be preferable for some patients.[18] Some physicians prefer electric vacuum aspiration in later first-trimester gestations,[19] although a recent study demonstrated similar safety and procedure time at more than 10 weeks' gestation with manual or electric vacuum.[20] Typically the cannula size used will correlate with the gestational age by weeks or be 1 size smaller.

For most patients, there is no indication for cervical preparation prior to the procedure. and the cervix can be opened manually using rigid dilators at the time of the procedure. Patient characteristics may influence a provider's decision to use other agents to prepare the cervix preoperatively, such as higher gestational age (more than 12 weeks), nulliparity, adolescent age, or known cervical stenosis. Although institutions and different organizations may have preferred cervical preparation methods, such as osmotic dilators or misoprostol, no standardized recommendation is *best* in the first trimester **(Table 1[21])**. Although dilation may be improved with cervical preparation, it has not been shown to reduce pain during the procedure.[21,22]

When discussing first-trimester procedural abortion, options for sedation and pain management may influence a patient's preference. Although some clinics offer deep sedation, most only offer this level of sedation in a surgery center or hospital operating room.[19] In either setting, cervical anesthesia, commonly with lidocaine 1% 20 mL (although other agents can

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be used), as a paracervical or intracervical block significantly reduces procedural pain.[23] A lidocaine 1% 20-mL solution is the equivalent of 200 mg, which is below the threshold for lidocaine toxicity. Methods to reduce toxicity include drawing back the syringe prior to injection to ensure the injection is not intravascular and monitoring for signs/symptoms of lidocaine toxicity (odd taste, ringing in ears, difficulty breathing, seizure, respiratory arrest).[24,25] Patients interested in additional sedation in an office setting can be offered intravenous fentanyl and/or midazolam in the setting of appropriate cardiovascular monitoring.[26] Fentanyl can be dosed initially at 50 mcg to 100 mcg, with a maximum of 200 mcg. Midazolam can be dosed initially at 1 mg to 3 mg and a maximum of 4 mg.[27] Oral opioids, oral anxiolytics, and inhaled nitrous oxide are all significantly less effective than intravenous sedation.[28-31]

Medication abortion

The most effective medication abortion regimens are a combination of mifepristone and misoprostol, for which research supports use at any gestational age through 11 weeks (77 days) in a home setting.[32] However, the efficacy declines substantially with advancing gestational age, which is important for counseling and may impact a patient's decision when considering medications or a procedure. Mifepristone weakens the implantation site but rarely causes abortion by itself, which is why it is approved by the FDA to be used with misoprostol, which induces myometrial contractions that result in pregnancy expulsion.

Mifepristone, an antiprogestin, is provided in a 200-mg tablet that can be obtained in the United States through a physician's office, clinic, or pharmacy (when prescribed by a physician) registered with the FDA to provide the drug.[33] Misoprostol (provided as 4-mcg to 200-mcg tablets), a PGE_1 analogue, is approved for buccal use 24 or more hours after mifepristone but is also highly effective when used vaginally or sublingually.[34-36] Vaginal administration allows for efficacy with a shorter interval between the 2 drugs (for gestations less than 63 days, misoprostol can be used as early as desired by the patient) and fewer gastrointestinal adverse effects. Sublingual administration may result in greater efficacy at higher gestational ages, especially when administered with repeat doses at 3-hour intervals, but results in more gastrointestinal adverse effects.[34,37,38]

Table 2. Contraindications for Medication Abortion[35]

- Confirmed or suspected ectopic pregnancy
- IUD in place (IUD can be removed before medication abortion)
- Current long-term corticosteroid therapy
- Chronic adrenal failure
- Known coagulopathy or anticoagulant therapy
- Inherited porphyria
- Intolerance or allergy to mifepristone or misoprostol

IUD, intrauterine device.

Because contraindications are infrequent, most patients desiring medication abortion should be eligible (**Table 2**).[35] Prior to treatment, patients should be given accurate descriptions of bleeding and pain expectations. Bleeding and pain typically start about 2 to 3 hours after using misoprostol. Although bleeding will be heavier than a period, clinically significant bleeding is rare, with transfusion in less than 0.1% of patients.[38] Patients should be counseled to contact their clinician if they experience bleeding that soaks more than 2 maxi-pads in 1 hour for 2 consecutive hours.[39] Patients who have a medication abortion should expect acute, severe cramping pain. Patients who are nulliparous, have a higher baseline anxiety, or dysmenorrhea experience more pain during a medication abortion.[40] With buccal misoprostol, the highest pain level occurs approximately 3.5 hours after misoprostol use. It lasts at that level for approximately 1 hour, and pain is significantly less within 24 hours after the misoprostol is taken.[41,42] Ibuprofen is more effective than acetaminophen for pain management and does not impact treatment efficacy.[43,44] Heating pads, hot showers, or hot baths can be helpful. Other alternatives, including acupressure and ambulation, have not demonstrated benefit.[45,46] Studies suggest that low-dose narcotics (eg, oral oxycodone) do not reduce the pain; however, given the short and acute nature of the event, a higher dose over a shorter period of time may be a better suggestion should a nonsteroidal anti-inflammatory drug or alternatives not provide relief.[47] Misoprostol is a known teratogen with increased risk to the fetus of developing limb defects and Möbius syndrome, so patients should be counseled about the potential effects if treatment fails and the pregnancy is continued.[48,49] There are

no known teratogenic effects with the use of mifepristone.[39,50]

If a patient wants to use telemedicine, medication abortion is safe and effective in patients with certain last menstrual periods that date the pregnancy as 10 weeks or less and lack any risk factors for an ectopic pregnancy (unilateral abdominal pain or spotting for past 5 days, intrauterine device [IUD] in place, history of tubal damage, or history of prior ectopic pregnancy). The general obstetric population has a 10 times higher risk of ectopic pregnancy than patients seeking abortion, but any patient factors that may be concerning for an ectopic pregnancy should prompt clinic assessment with ultrasound imaging instead of a no-test medication abortion.[51]

Follow-up for a medication abortion is typically 1 week after the misoprostol, and clinic assessments typically involve ultrasound examination. Adverse outcomes do not differ with telemedicine visits compared with clinic follow-up. Patients prefer a telemedicine follow-up when given the option. The clinician can call a patient following administration of misoprostol to review symptoms. If the patient's history is convincing of completed abortion, a home urine pregnancy test can be performed 3 weeks later.[52-54] If the patient or clinician thinks that the pregnancy is continuing, an in-person visit is typically warranted. Ultrasonography is useful to assess for continuing pregnancy (eg, gestational sac presence) as well as for an ectopic pregnancy. There is no threshold of endometrial lining that correlates clinically to indicate an aspiration procedure is necessary following a medication abortion.[55]

Postabortion contraception

Patients may want to avoid another pregnancy immediately after an abortion. Ovulation can resume quickly, as soon as 10 days after a procedural abortion and 8 days after a medication abortion.[56,57] As such, the ability to provide contraceptive counseling is key to ensuring full care. However, clinicians must also recognize that the majority (approximately two-thirds) of patients are not interested in discussing contraception at the time of their abortion.[57] The low interest is not because they do not want contraception but is because of their interest in only abortion services at the time of the visit, already having a contraception method in mind, or wanting to follow up with their primary gynecologist for contraception.[58,59]

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All forms of contraception can be discussed and offered to the patient. With procedural abortion, all methods can be initiated immediately after the abortion. IUDs can be placed at the same time as the procedure without any increased risk of expulsion or infection.[60,61]

With medication abortion, patient-controlled methods can be initiated after the abortion has occurred. IUDs can be placed when the abortion is confirmed to be completed, as soon as 48 hours following completion of a medication abortion with no difference in expulsion of the IUD when compared with IUDs placed 2 to 4 weeks following the medication abortion.[62,63] Clinicians may question the impact of initiating a nondaily systemic progestin at the time mifepristone, an antiprogestin, is used. The implant does not impact any outcomes with medication abortion and can be placed at the time of mifepristone administration or later.[64] A randomized trial showed an increase in ongoing pregnancies in patients who received injectable contraception with depot medroxyprogesterone acetate the same day as mifepristone in a medication abortion. However, the aspiration rate (11% among all patients who have medication abortions to 75 days) was not different.[65] In this particular case, we would recommend discussing these findings with the patient to decide timing of injectable contraception.[66]

Conclusions

The landscape of abortion care is shifting. Safe, effective methods are now inaccessible to many patients and providers. As this article is being written, there is an effort underway to revoke the FDA approval of mifepristone. This would result in resorting to alternative regimens (misoprostol only) that have higher failure rates and increasing morbidity for patients.[66,67] ■

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