Update on medical abortion

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Medical abortion (MA) involves the use of medications to terminate a pregnancy. In Canada, the mifepristone and misoprostol combination is the only Health Canada–approved MA regimen. Abortion is common and 1 in 3 Canadian women will have an abortion in their lifetime.[1] In 2018, the approved indication for the mifepristone and misoprostol combination was extended for pregnancies of 49 days' (7 weeks) to 63 days' (9 weeks) duration,[2] but evidence has shown it is safe and effective for gestational age up to 70 days (10 weeks).[3] Canadian health care providers are no longer required to complete a training course before prescribing or dispensing the mifepristone and misoprostol combination, and the cost of the medications is covered in most Canadian jurisdictions, either through public or private health insurance.[2]

With increased access and clear demand, primary care providers are well positioned to assess and educate patients who wish to have MA. We developed an infographic (**Figure 1**), also available at **CFPlus**,* to update health care professionals on MA, as well as to help them support patients. We based the infographic on the Canadian medical abortion guidelines,[3] the medication supplement for the guidelines,[4] and the medical abortion monograph published by the Canadian Pharmacists Association.[5]

How to take MA medications

Mifepristone, a potent antiprogesterone, is taken first as a 200-mg oral tablet, administered with a glass of water. It begins the MA process by causing the endometrial lining to break down and the products of pregnancy to detach from the uterine lining. Mifepristone also promotes uterine contraction, softens the cervix, and sensitizes the myometrium to the effects of misoprostol.

Misoprostol is taken 1 to 2 days later. Patients typically prefer the buccal route, where two 200-µg tablets are placed in each cheek pouch for 30 minutes (2 tablets in the left cheek and 2 tablets in the right cheek for a total of 4 tablets), with any remaining fragments swallowed with water. It can also be administered vaginally or sublingually. Misoprostol is a synthetic prostaglandin that causes the uterus to contract and release the uterine contents.

Prescribing MA

In Canada, MA can be prescribed and dispensed by physicians or nurse practitioners, and dispensed by pharmacists. It is not necessary to supervise administration. Before a prescription is written, the pregnancy should be confirmed using an in-office pregnancy test and the gestational age calculated using the last menstrual period, a pelvic examination, or an ultrasound. Bloodwork should be completed to determine Rh immune globulin status. If the patient is Rh-negative and at least 49 days pregnant, she should receive an injection of immune globulin 24 hours before starting MA to minimize risk of Rh sensitization for future pregnancies. There is limited evidence for the use of Rh immune globulin before 49 days of pregnancy.[3] Finally, an ectopic pregnancy should be ruled out either by ultrasound or clinical symptoms, risk factors, or β-human chorionic gonadotropin levels. A follow-up appointment 7 to 14 days after MA should include a clinical examination, ultrasound, or β-human chorionic gonadotropin measurement to confirm a successful abortion.

Contraindications to MA

Medical abortion has several contraindications, which can be reviewed with the patient using the *Medical Abortion Charting Form* from the Canadian Abortion Providers Support network (**https://www.caps-cpca.ubc.ca/AnnokiUploadAuth.php/e/e0/Canadian_Resource_1_-_Medical_Abortion_Prescriber_Checklist_2018-07-11.pdf**). Mifepristone should be avoided in patients with inherited porphyria, as it can cause a porphyria storm, leading to severe abdominal pain, chest pain, vomiting, and confusion.[6] Mifepristone is also a potent antiglucocorticoid and should be avoided in patients with chronic adrenal failure or uncontrolled asthma. Patients taking long-term glucocorticoid therapy might require a higher glucocorticoid dose for a week after taking mifepristone. Patients taking anticoagulants, or who have blood disorders or severe anemia (hemoglobin level <95 g/L), should use MA with caution, as blood loss is expected in MA. Medical abortion will not work for an ectopic pregnancy, and it should not be prescribed if a patient is at increased risk of ectopic pregnancy or has severe abdominal pain or vaginal bleeding. Finally, intrauterine devices increase the likelihood of ectopic pregnancy and should be removed before MA, once an ectopic pregnancy has been ruled out.

Drug interactions

There is little information on the clinical importance of drug interactions with MA. That said, mifepristone is metabolized by the CYP (cytochrome P450) 3A4 enzyme, and CYP 3A4 inducers such as phenytoin, rifampin, or St John's wort might decrease the effectiveness of MA, leading to a higher likelihood of treatment failure.

*The **infographic** on **medical abortion (Figure 1)** is available at **www.cfp.ca**. Go to the full text of the article online and click on the **CFPlus** tab.

Figure 1

Medical Abortion 101

Medical abortion uses medications instead of surgery to end a pregnancy

1 It Is Highly Effective

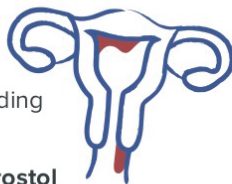
Ends up to 98% of pregnancies if used in the first 10 weeks

Less effective in later pregnancy

Free in most Canadian provinces

Health Canada approves its use for up to 9 weeks

2 What To Expect



After mifepristone

- may have some light bleeding
- many have no bleeding

After misoprostol

within:

3 hrs
- strong, painful cramping
- bleeding heavier than a period
- may pass lemon-sized clots
- fever over 38°C

24 hrs
- nausea, headache, dizziness, diarrhea

2 weeks
- light bleeding

Won't see a fetus if less than 8 weeks gestation

3 Managing Side Effects

diarrhea ^ loperamide

vomiting/nausea ^ dimenhydrinate

cramping ^ naproxen ibuprofen opioid

Only use pads, not tampons

How to Take It

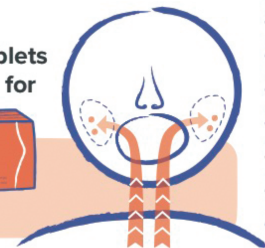
Start

Take 1 mifepristone tablet with a glass of water

- blocks progesterone in the uterus
- causes uterus to shed its lining

24-48h later

Put 2 misoprostol tablets in each cheek pouch for 30 mins



Swallow remnants with a glass of water

- causes cervix to open and uterus to contract to push out pregnancy

Seek Urgent Care If

- soaking 2 maxi-pads per hour for more than 2 hrs
- clots larger than a lemon for more than 2 hrs
- pain doesn't improve with medication
- fever, nausea, diarrhea, or weakness ***occuring 24 hrs after taking misoprostol***

After the Abortion

- ovulation can happen within 8 days of an abortion
- can start birth control pills after taking misoprostol
- can have IUD inserted 7-14 days after misoprostol
- see abortion provider in 7-14 days to confirm the abortion is complete

RxTx. Ottawa (ON): Canadian Pharmacists Association; c2018. Medical Abortion; Available from: www.myrxtx.ca
Costescu D et al. Medical Abortion. J Obstet Gynaecol Can 2016;38(4):366-89.
Soon JA et al. Medications used in evidence-based regimens for medical abortion an overview. J Obstet Gynaecol Can 2016;38(7):636-45.

Content by Kelly Grindrod, MSc, PharmD; Ashley Bancsi; Soon JA; Nese Yuksel; Sheila Dunn. Design by Adrian Poon, BA

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Inhibitors such as ketoconazole and grapefruit juice might increase the mifepristone side effects such as nausea. Food and antacids can decrease the bioavailability of oral misoprostol, but this should have little effect if it is administered by the buccal or vaginal route.

Patient education

Patients should know what to expect when they complete MA at home. Some patients can have bleeding after taking the mifepristone (step 1) but many do not feel anything at all. By comparison, within 3 hours of taking misoprostol (step 2), patients should expect bleeding heavier than menses. Patients should seek urgent care if they are soaking 2 sanitary pads per hour for more than 2 hours; if they are passing lemon-sized tissues for more than 2 hours; or if the pain is unbearable or not improving with medication. Patients who do not have bleeding after misoprostol likely had either a treatment failure or are retaining the products of conception. Patients should be counseled on the potential for failure with MA and the potential need for a dilation and curettage procedure. Light bleeding can last an average of 2 weeks after MA, and only sanitary napkins should be used, not tampons or menstrual cups.

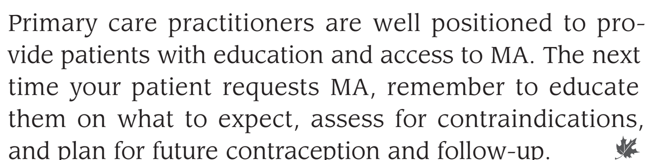
Cramps are often painful and patients can find relief from over-the-counter nonsteroidal anti-inflammatory drugs such as ibuprofen or naproxen. Some patients might also benefit from having a few doses of a prescription opioid. Some individuals might prefer to take the misoprostol in the evening to avoid heavy cramping during the daytime hours.

Misoprostol can cause nausea, diarrhea, dizziness, fever, and headaches within 2 to 4 hours of administration. Loperamide and dimenhydrinate can be recommended for symptom control. A fever of 38°C (100.4°F) or higher, and nausea, vomiting, diarrhea, dizziness, or weakness occurring more than 24 hours after misoprostol administration require emergency assessment for infection or toxic shock syndrome.

Finally, it is crucial that practitioners inquire about future contraception, as ovulation can occur 8 days after MA, and counsel on available contraception and pregnancy options. For example, hormonal contraceptive pills or the patch can be started when misoprostol is taken, or an intrauterine device can be inserted at the follow-up visit after MA.

Conclusion

Primary care practitioners are well positioned to provide patients with education and access to MA. The next time your patient requests MA, remember to educate them on what to expect, assess for contraindications, and plan for future contraception and follow-up.



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Competing interests

None declared

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