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Putting Evidence into Practice

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Misoprostol for Incomplete First Trimester Miscarriage

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Clinical Question

How does management with misoprostol (Cytotec) compare with expectant management or uterine aspiration in women with incomplete first trimester miscarriage?

Evidence-Based Answer

Misoprostol, administered by various routes, is as effective as expectant management and nearly as effective as uterine aspiration. All three options have high success rates for completing miscarriage. Women treated with misoprostol had higher rates of nausea, prolonged bleeding, and unplanned surgery, but roughly 95% (1,280 out of 1,355) were able to avoid having an invasive surgical procedure. (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

Practice Pointers

Miscarriage occurs in up to 15% of pregnancies, and it commonly presents as bleeding during the first trimester.[1] Threatened miscarriage refers to vaginal bleeding with a closed cervical os. About one-half of affected women eventually miscarry, although the risk is much lower if a fetal heartbeat has been detected.[2] The term inevitable miscarriage refers to the leakage of amniotic fluid with an open cervical os. Miscarriage is incomplete if the placenta and fetus have not been fully expelled. This Cochrane review focuses on women who have symptomatic incomplete miscarriage. A 2006 Cochrane review by the same authors addressed misoprostol use for fetal demise in early pregnancy before the occurrence of miscarriage symptoms (i.e., missed miscarriage).[3]

Recently, two cutoff measurements on ultrasonography have been shown to reliably confirm a nonviable pregnancy: the absence of an embryo (regardless of yolk sac) when the mean gestational sac diameter is at least 25 mm, or an embryo with a crown-rump length of at least 7 mm and no heartbeat.[4] When these cutoffs are not reached, use of the following algorithm may be helpful: http://www.reproductiveaccess.org/m_m/downloads/FirstTrimesterBleedingAlgorithm.pdf.

When incomplete miscarriage has been diagnosed, expectant management and surgery occupy opposite ends of the therapeutic spectrum. Although most women complete miscarriage within 14 days regardless of the type of management chosen,[1] many do not want to "wait it out," nor do they desire surgical evacuation.

Misoprostol, a prostaglandin E1 analogue, has been used off-label for many years as a safe and effective treatment for first trimester incomplete miscarriage. Misoprostol binds to smooth muscle myometrium and causes uterine contractions. Oral, sublingual, buccal, and vaginal preparations are absorbed systemically. Doses range from 200 to 800 mcg and are generally repeated once in 24 to 72 hours.

In this Cochrane meta-analysis, the reviewers compared misoprostol with expectant management and uterine aspiration for three primary outcomes: completed miscarriage, the need for surgical uterine evacuation (or a second uterine evacuation in the uterine aspiration group), and death or serious complications. The 20 included studies were randomized controlled trials involving first trimester incomplete miscarriages that occurred before 13 weeks of gestation in 4,208 women. Twelve of the studies used ultrasonography to confirm diagnosis, five used clinical diagnosis, and three used clinical diagnosis with ultrasound confirmation when necessary. Completeness of miscarriage was determined at intervals ranging from three days to eight weeks. Ultimately, the review was underpowered

to compare misoprostol with expectant care, although the available studies did not show significant differences in their primary outcomes.

The Cochrane reviewers found that use of misoprostol was only slightly inferior to surgery for the successful completion of miscarriage. Women in the misoprostol groups had completed evacuation rates of 80% to 99%, whereas those in the surgical groups had completed evacuation rates of 91% to 100% (relative risk = 0.97; 95% confidence interval, 0.95 to 0.99). Patients receiving misoprostol needed markedly less surgical intervention (relative risk = 0.06; 95% confidence interval, 0.02 to 0.13), thus avoiding surgery approximately 95% of the time. There were no differences in the rates of death or serious complications. Secondary outcomes revealed approximately two days more of bleeding (mean difference = 2.1 days; 95% confidence interval, 1.18 to 3.07) and more unplanned surgery (relative risk = 5.8; 95% confidence interval, 2.93 to 11.56) in the misoprostol group.

Authors of one study compared oral and vaginal preparations of misoprostol and found no differences in completed miscarriage, although patients who used the oral preparation had more diarrhea. In studies that assessed patient satisfaction, women were equally satisfied regardless of the treatment they received.

Expectant management of first trimester incomplete miscarriage usually results in completed miscarriage. Misoprostol and uterine evacuation may hasten the process. A protocol for using misoprostol to manage incomplete and missed miscarriage is available at http://www.reproductiveaccess.org/m_m/downloads/misoprostol.pdf.

SOURCE: Neilson JP, Gyte GM, Hickey M, Vazquez JC, Dou L. Medical treatments for incomplete miscarriage. *Cochrane Database Syst Rev.* 2013;(3):CD007223.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD007223.

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Collaborative Care for Depression and Anxiety

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Clinical Question

Is the collaborative care model effective for treating patients with depression, anxiety, or both?

Evidence-Based Answer

The collaborative care model is effective for treating adults with depression and/or anxiety using a multiprofessional approach to patient care, a structured management plan, scheduled patient follow-ups, and enhanced interprofessional communication. (Strength of Recommendation: A, based on consistent, good-quality patient-oriented evidence.)

Practice Pointers

Depression and anxiety pose a challenge to the health care system; primary care clinicians often must detect, manage, and prevent these conditions without assistance from other professionals trained to treat these specific disorders. Depression and anxiety, which often present together,[1] have a significant impact on physical health, social and occupational functioning, and mortality.[2]

The complexity of treating mental health problems and the need to improve the current health care delivery system have prompted researchers to develop a collaborative care model. The term is used to describe any approach to patient care that involves collaboration between primary care clinicians and psychiatrists, psychologists, nurses, social workers, and other health care professionals. This Cochrane review evaluated 79 randomized controlled trials with 24,308 patients. Collaborative care was compared with routine care by a primary care clinician alone or alternative treatments for depression and anxiety, such as cognitive behavior therapy.

Three-fourths of the trials were conducted in the United States. Patients who met criteria from the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed., for depression or anxiety were recruited from primary care, community, and subspecialty settings. The intervention groups involved the collaboration of at least three different care providers—the primary care clinician, case manager, and mental health professional—and included psychopharmacology, individual and group psychotherapy, cognitive behavior therapy, and support from social workers and nurses. U.S. and international studies had similar results. The primary

outcome evaluated was the decrease in depression or anxiety.

Outcomes for depression with the collaborative care model were better than those of usual care/primary care at zero to six months (standardized mean difference [SMD] = –0.34; 95% confidence interval [CI], –0.41 to –0.27), at seven to 12 months (SMD = –0.28; 95% CI, –0.41 to –0.15), and at 13 to 24 months (SMD = –0.35; 95% CI, –0.46 to –0.24). Outcomes for anxiety were also significantly better for collaborative care at zero to six months (SMD = –0.30; 95% CI, –0.44 to –0.17), at seven to 12 months (SMD = –0.33; 95% CI, –0.47 to –0.19), and at 13 to 24 months (SMD = –0.20; 95% CI, –0.34 to –0.06). Beyond 25 months, there were no outcomes reported for collaborative care vs. usual care for anxiety or depression.

The Institute for Clinical Systems Improvement recognizes the collaborative care model as an important means of treating depression.[3] It recommends coordination of patient care with other clinicians to assess for barriers to treatment, such as lack of motivation, medication adverse effects, and social and environmental issues. This allows for better outcomes through more accurate referrals and appropriation of resources for patients to improve treatment adherence and overall quality of life.[4]

SOURCE: Archer J, Bower P, Gilbody S, et al. Collaborative care for depression and anxiety problems. *Cochrane Database Syst Rev.* 2012;(10):CD006525.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD006525.

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