UC Davis

UC Davis Previously Published Works

Title

Misoprostol before to first-trimester surgical abortion: do not jump on the bandwagon, not all evidence is created equal.

Permalink

<https://escholarship.org/uc/item/099302td>

Journal

American journal of obstetrics & gynecology MFM, 2(4)

ISSN

2589-9333

Authors

Perriera, Lisa
Creinin, Mitchell D

Publication Date

2020-11-01

DOI

10.1016/j.ajogmf.2020.100244

Peer reviewed

Misoprostol before to first-trimester surgical abortion: do not jump on the bandwagon, not all evidence is created equal

Lisa Perriera, MD, MPH; Mitchell D. Creinin, MD

The systematic review and metaanalysis study published by O'Shea et al¹ in the current issue of the *American Journal of Obstetrics & Gynecology MFM* appears to endorse routine cervical preparation with misoprostol before abortion at <13 weeks' gestations. Do the findings truly represent ways to make a highly safe and easy to perform procedure safer and easier to perform? In 2018, the National Academies of Sciences, Engineering, and Medicine published "The Safety and Quality of Abortion Care in the United States," with findings that abortions in all pregnancies are incredibly safe. The report also discredits data suggesting that surgical abortion is associated with negative outcomes, such as secondary infertility, pregnancy-related hypertensive disorders, preterm birth, or breast cancer.² This report found abortion to be very safe in its current form, without additional cervical preparation in the first trimester of pregnancy.

Abortion care is, like all of medicine, patient-centered; we aim to provide patients the safest procedure with the fewest side effects, for the lowest cost, and in the shortest amount of time in the clinical setting. The review by O'Shea et al¹ fails to address patient satisfaction. There is clear evidence from this systematic review and metaanalysis that misoprostol, by any route, adds 1 to 3 hours of time to the abortion experience, with the disadvantages of increased bleeding, nausea, vomiting, diarrhea, and fever in most studies.

The positive outcomes evaluated in this metaanalysis were ease of dilation and lower incomplete abortion rate. However, "easier" dilation with misoprostol does not mean that dilation was difficult without it. No study demonstrates that ease of dilation correlates with lower cervical laceration or uterine perforation rates, including the studies in this review and metaanalysis. These complications are already rare without misoprostol cervical preparation. The 7 studies included in this review looked at the outcome of incomplete abortion. Of

the 3014 abortions completed in those 7 studies, only 37 (1.2%) were incomplete. Even if incomplete abortion is significantly lower with misoprostol cervical preparation, the number needed to treat (with misoprostol) to avoid this complication is not worth the negative attributes of increasing time in the abortion facility and bleeding for all patients.

As with any systematic review, it is important to fully understand the studies evaluated, including the quality and the location and population to assess generalizability. The most relevant studies in this review are the 10 studies that compared misoprostol with placebo. As pointed out by O'Shea et al,¹ 4 of these studies did not appropriately report random sequence generation, and 7 did not report sufficient information about group concealment. Furthermore, 2 of these 10 studies were excluded from the final analysis, and 4 of the remaining 8 studies were unblinded. The potential for bias among these studies is large. When poor and biased data are used in a systematic review and/or metaanalysis, how definitive is the conclusion? Just as importantly, the data for incomplete abortion in this metaanalysis come from 6 trials in developing countries. Are these data generalizable to all populations? Perhaps a sounder conclusion is that in a developing world setting with various types of equipment, misoprostol is beneficial; evidence is relatively lacking for developed countries.

Most importantly, the first trimester of pregnancy is a broad range of time, with most abortions occurring at ≤10 weeks' gestation.³ Dilation at 7 or 8 weeks' gestation is very different compared with dilation at 12 or 13 weeks' gestation. Few would argue with a requirement for cervical preparation at >12 weeks' gestation, especially in nulliparous women. Without data that divide the first trimester of pregnancy more appropriately, these findings cannot be translated to clinical care guidance. Consider preterm deliveries at 24 vs 36 weeks' gestation—both are preterm, but quite different. The concerns are at opposite ends of the spectrum. We have to see these data regarding cervical preparation in the same way.

The Society of Family Planning guidelines state that "given the small absolute risk of complications, the benefit of routine use of misoprostol or osmotic dilators in first-trimester surgical abortion is unclear. Although cervical priming results in reduced abortion time and improved provider ease, it requires a delay of at least 1 to 3 hours and may confer side effects. The Society of Family Planning does not recommend routine cervical priming for first-trimester suction abortion but recommends limiting consideration of cervical priming for women at increased risk of complications from cervical dilation, including those late in the first trimester, adolescents

From the Division of Gynecologic Specialties, Department of Obstetrics and Gynecology, Thomas Jefferson University, Philadelphia, PA (Dr Perriera); and Department of Obstetrics and Gynecology, University of California, Davis, Sacramento, CA (Dr Creinin).

Received Sept. 25, 2020; accepted Sept. 26, 2020.

The authors report no conflict of interest.

Corresponding author: Lisa Perriera, MD, MPH. Lisa.Perriera@jefferson.edu

2589-9333/free

© 2020 Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.ajogmf.2020.100244>

➤ Related article, 100220.

and women in whom cervical dilation is expected to be challenging.”⁴ We believe that the findings of O’Shea et al¹ do not change this guidance, which weighed these same outcomes in a patient-centered manner. ■

REFERENCES

1. O’Shea LE, Lord J, Fletcher J, Hasler E, Cameron S. Cervical priming before surgical abortion up to 13⁺⁶ weeks’ gestation: a systematic review and meta-analyses for the National Institute of Health and Care

Excellence (NICE) – new clinical guidelines for England. *Am J Obstet Gynecol MFM* 2020;2:100220.

2. The quality of abortion care depends on where a woman lives, says one of most comprehensive reviews of research on safety and quality of abortion care in the U.S. The National Academies of Sciences, Engineering, and Medicine. 2018. Available at: <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=24950>. Accessed November 9, 2020.

3. Jatlaoui TC, Eckhaus L, Mandel MG, et al. Abortion surveillance - United States, 2016. *MMWR Surveill Summ* 2019;68:1–41.

4. Allen RH, Goldberg AB. Cervical dilation before first-trimester abortion (<14 weeks’ gestation). *Contraception* 2016;93:277–91.