



Contraception

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A factorial-design randomized controlled trial comparing misoprostol alone to Dilapan with misoprostol and comparing buccal to vaginal misoprostol for same-day cervical preparation prior to dilation & evacuation at 14 weeks 0 days–19 weeks 6 days gestation' ☆ ☆☆

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Abstract

Objectives

To compare procedure times following same-day cervical preparation using misoprostol 400 mcg alone or misoprostol 400 mcg plus hygroscopic dilators for dilation and evacuation (D&E) before 20 weeks gestation and to compare side effects of buccal and vaginal misoprostol administration.

Study Design

We randomized women undergoing D&E at 14 weeks 0 days–19 weeks 6 days gestation to receive (1) hygroscopic dilators or not and (2) buccal or vaginal misoprostol using a 2×2 factorial design. We assessed two primary outcomes: (1) total procedure time, defined as time to insert hygroscopic dilators plus D&E time, and (2) side effects of misoprostol 4–6 h after initiation of cervical preparation using a 5-point Likert scale assessing nausea, emesis, diarrhea, chills and cramps.

Results

We randomized 163 women and 161 completed the study. We completed all procedures in one day. Mean total procedure time was 14.0 and 10.8 min. with and without hygroscopic dilators (difference 3.2 minutes, 95% CI 1.7, 4.6). Mean D&E procedure time was 0.7 (95% CI –0.8, 2.1) min longer without hygroscopic dilators. Initial cervical dilation was 15.6 and 11.7 mm with and without hygroscopic dilators (difference 3.9 mm, 95% CI 3.1, 4.8). Participants receiving buccal misoprostol reported less chills (1.9) than women receiving vaginal misoprostol (2.3), $p=0.04$.

Conclusions

Hygroscopic dilators with misoprostol requires more time and increases cervical dilation without shortening D&E time when used for cervical preparation 4–6 h prior to D&E before 20 weeks. Women receiving vaginal misoprostol may have more chills compared to buccal misoprostol.

Implications

Adding hygroscopic dilators to misoprostol for same day D&E procedures at less than 20 weeks gestation increases total intervention time without reducing D&E time and is less favored by patients. Clinical judgment requires balancing relative effectiveness with patient preference. Further studies should evaluate the side effect profile of vaginal misoprostol.



Keywords

Second-trimester abortion; Surgical abortion; Dilation and evacuation; Cervical preparation; Osmotic dilators; Misoprostol

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- ★ *Conflict of Interest/Disclosures:* Matthew F. Reeves, MD MPH is a consultant for ContraMed LLC and Cooper Surgical. Pamela S. Lotke, MD MPH is on an international advisory board for Bayer Healthcare. The other authors have no conflicts of interest to disclose.
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