Mifepristone-Misoprostol Dosing Interval and Effect on Induction Abortion Times: A Systematic Review

Abstract

OBJECTIVE: To examine the effect of the interval between mifepristone and misoprostol administration on induction time (first misoprostol dose to abortion), total procedure time (mifepristone administration to abortion), and safety and efficacy in second-trimester induction abortion (13-24 weeks).

DATA SOURCES: We searched MEDLINE (1966-2012), ClinicalTrials.gov, POPLINE, and the Cochrane Controlled Trials Register using search terms for second trimester, abortion, misoprostol, and mifepristone and reviewed reference lists of published reports.

METHODS OF STUDY SELECTION: Our search revealed 138 articles of which 29 met inclusion criteria: 20 randomized controlled trials and nine observational studies. Studies were included if, in any study arm, mifepristone and misoprostol were used for medical abortion in the second trimester.

TABULATION, INTEGRATION, AND RESULTS: Two authors independently reviewed the articles and abstracted the data using standardized data abstraction templates to summarize data. Discrepancies were resolved by consensus. Three studies directly compared a 1-day to 2-day mifepristone-misoprostol interval; they showed small differences in median induction times (weighted average 7.3 hours, range 7-8.5 for a 1-day interval; weighted average 6.8 hours, range 6.3-7.2 for a 2-day interval) and no significant difference in percent expelled by 12 hours or 24 hours. When all randomized studies using mifepristone and misoprostol were pooled by comparable mifepristone-misoprostol interval and misoprostol dose, induction times (first misoprostol dose to expulsion) were only 1-2 hours longer for a 12- to 24-hour interval compared with a 36-48-hour interval, whereas total abortion times (mifepristone to expulsion) were at least 18 hours longer in the 36- to 48-hour group. Induction times varied by misoprostol dosing, with 400-microgram misoprostol protocols resulting in shorter induction times than 200-microgram protocols.

CONCLUSION: Shortening the mifepristone-misoprostol interval, thereby reducing total abortion time, does not compromise the safety or efficacy of second-trimester medication abortion and may be used to accommodate patient or health care provider preference.