Prior uterine evacuation and risk for preterm birth

TO THE EDITORS: We read with interest the meta-analysis by Saccone et al regarding the risk of preterm birth in women with a history of uterine evacuation. While the authors used rigorous methodology to conduct their meta-analysis, the outcomes are only as good as the original data from which they are derived. Since most of the original studies did not include a number of known confounders for preterm birth, including prior preterm birth, multiple gestations, and short interpregnancy interval to name a few, it is important to highlight the potential for bias and false assumptions based on the meta-analysis.

The vast majority of the reported odds ratios (OR) in this article were <2, most with a confidence interval (CI) approaching 1.0. Because of the large sample sizes, small differences in the outcomes can provide significant P values and narrow CI, which may yield statistically significant results but do not reflect meaningful clinical differences. Additionally, we were surprised by the significantly higher OR provided by the Zhou et al article in Figures 4, A; 5, A; 6, A; 10; and 12 (OR, 19.51; CI, 17.61–21.61) and were unable to verify those results in the original article.

The authors suggest that perhaps women should be encouraged to use medical methods for uterine evacuation or to consider surgical methods with cervical preparation. We believe it is premature to make these recommendations because: (1) the overall association is weak; and (2) none of the studies included controlled for the variety of surgical techniques that may be used to evacuate a uterus, such as cervical preparation. Until we have more detailed information about the impact of various procedures and cervical preparation by gestational age, it is difficult to fully inform patients on the potential risk for preterm birth as a result of uterine evacuation.

We would encourage the authors to reconsider their recommendations in light of the weak association between surgical uterine evacuation and subsequent preterm birth given that this is based on observational studies and the inherent limitations of this approach. Given the already hostile environment and stigma surrounding abortion care, we need to ensure that we avoid placing premature blame on surgical evacuation as a risk factor for preterm birth.

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The authors report no conflict of interest.

REFERENCES

REPLY

We thank Macafee et al for their interest in our study. They emphasize important issues, with which we in general agree. In our manuscript we highlighted the limitations of the meta-analysis, including that about half of the original studies did not adjust for confounders, and because of the stigma associated with abortion, previous procedures may have been underreported in the case and control groups. Lack of adjustment for confounders is indeed an important limitation. Approximately 18 of the 36 included studies (references 24–27, 29–35, 37–39, 44–47) did adjust for some confounders, and most found an association with surgical termination and preterm birth, even after they adjusted for confounders. We also call for future research and for well-designed randomized trials. This call for more research in the effect of uterine evacuation on future pregnancies is probably our strongest recommendation. We acknowledge that medical and surgical abortion are incredibly safe procedures and seek to know the true impact that abortion may have on future pregnancies in prospective trials. We think that patient preference for the type of abortion experience should help guide the decision-making and that women should be given the choice between a surgical and a medical approach.

Our meta-analysis, based on the available literature, included more than 1,000,000 women; it suggests that previous surgical uterine evacuation is an independent risk factor for spontaneous preterm delivery and that women with history of surgical abortion have about twice the odds of preterm birth in the subsequent pregnancy compared with women without such a history. We are hopeful that our study will inspire prospective research to determine which method of termination results in the lowest risk of preterm birth in future pregnancies.

We agree that the odds ratios (ORs) provided by Zhou et al are much greater (OR 19.51, 95% confidence interval 17.61–21.61) than the other studies. The percentage of women are reported in Table 3 of the original study.