GYNECOLOGY

Contraception after medication abortion in the United States: results from a cluster randomized trial

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BACKGROUND: Understanding how contraceptive choices and access differ for women having medication abortions compared with aspiration procedures can help to identify priorities for improved patient-centered postabortion contraceptive care.

OBJECTIVE: The objective of this study was to investigate the differences in contraceptive counseling, method choices, and the use between medication and aspiration abortion patients.

STUDY DESIGN: This subanalysis examines data from 643 abortion patients from 17 reproductive health centers in a cluster, randomized trial across the United States. We recruited participants aged 18–25 years who did not desire pregnancy and followed them up for 1 year. We measured the effect of a full-staff contraceptive training and abortion type on contraceptive counseling, choice, and use with multivariable regression models, using generalized estimating equations for clustering. We used a survival analysis with shared frailty to model actual intrauterine device and subdermal implant initiation over 1 year.

RESULTS: Overall, 26% of participants (n = 166) had a medication abortion and 74% (n = 477) had an aspiration abortion at the enrollment visit. Women obtaining medication abortions were as likely as those having aspiration abortions to receive counseling on intrauterine devices or the implant (55%) and on a short-acting hormonal method (79%). The proportions of women choosing to use these methods (29% intrauterine device or implant, 58% short-acting hormonal) were also similar by abortion type. The proportions of women who actually used short-acting hormonal methods (71% medication vs 57% aspiration) and condoms or no method (20% vs 22%) within 3 months were not significantly different by abortion type. However, intrauterine device initiation over a year was significantly lower after the medication than the aspiration abortion (11 per 100 person-years vs 20 per 100 person-years, adjusted hazard ratio, 0.50; 95% confidence interval, 0.28–0.89). Implant initiation rates were low and similar by abortion type (5 per 100 person-years vs 4 per 100 person-years, adjusted hazard ratio, 2.41; 95% confidence interval, 0.88–6.59). In contrast to women choosing short-acting methods, relatively few of those choosing a long-acting method at enrollment, 34% of medication abortion patients and 53% of aspiration abortion patients, had one placed within 3 months. Neither differences in health insurance nor pelvic examination preferences by abortion type accounted for lower intrauterine device use among medication abortion patients.

CONCLUSION: Despite similar contraceptive choices, fewer patients receiving medication abortion than aspiration abortion initiated intrauterine devices over 1 year of follow-up. Interventions to help patients receiving medication abortion to successfully return for intrauterine device placement are warranted. New protocols for same-day implant placement may also help patients receiving medication abortion desiring a long-acting method to receive one.

Key words: abortion, implant, intrauterine device, long-acting reversible contraception, medical abortion, medication abortion, postabortion contraception, randomized trial

Medication abortion accounts for almost one third of nonhospital abortions in the United States.[1] The method can improve access in settings without an aspiration abortion provider, and some women prefer a procedure that seems more natural or that affords more privacy and autonomy.[2,3]

Medication abortion (MAB), however, presents unique challenges for providing the full range of contraceptives, particularly long-acting reversible methods, intrauterine devices (IUDs), and subdermal implants. All nonpermanent methods, including long-acting reversible contraceptives (LARCs), can be provided safely the same day as aspiration abortion.[4-6] Yet until recently, following MAB, all long-acting methods have required a second visit. IUDs cannot be placed until the abortion is deemed complete at a follow-up visit, and patients frequently do not return.[7-10] Implants too have traditionally been placed at follow-up, although new data support placement at the mifepristone visit.[11,12]

There is a gap in the medical literature about contraceptive care after a medication abortion compared with post-aspiration abortion. It remains unknown whether counseling received, choices made, or contraceptive use differs by abortion type and, if so, why. Medication and aspiration abortion patients may be different, hold varying preferences for reproductive health care, and choose different methods. They may also receive different contraceptive counseling or have disparate access to selected methods.

We examined postmedication and aspiration abortion contraceptive care with data from a large, US-based cluster randomized trial evaluating the impact of a provider training about LARC on women's contraceptive use and pregnancy. In prior analyses, abortion patients at intervention sites were more likely than women at control sites to receive counseling on and to choose long-acting methods; however, they were not more likely to actually initiate these methods, largely because of

Cite this article as: Rocca CH, Goodman S, Grossman DJ, et al. Contraception after medication abortion in the United States: results from a cluster randomized trial. Am J Obstet Gynecol 2017;xxx:xx-xx.

0002-9378/$36.00

https://doi.org/10.1016/j.ajog.2017.09.020

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funding barriers at abortion visits, and experienced high pregnancy rates over follow-up.[13,14]

This subanalysis assesses differences in contraceptive care and use among 643 abortion patients in the trial. Understanding how care and use differ for women having MABs compared with aspiration abortions can help to identify priorities for improved patient-centered contraceptive care.

Materials and Methods

Study design and procedures

We conducted a cluster randomized trial with 40 Planned Parenthood health centers, described previously.[13,14] Clinics, which served low-income and diverse populations, were randomly allocated to receive LARC training or provide standard care. In this post hoc subanalysis, we examined data from the participants at the 17 sites providing abortion care across 10 geographically diverse states (California, Colorado, Connecticut, Florida, Idaho, Minnesota, North Carolina, Ohio, Pennsylvania, and Washington).

At intervention clinics, staff participated in a half-day, continuing medical education—accredited training on LARC evidence, including contraceptive effectiveness, and eligibility, including same-day placement.[4,15] The training covered patient-centered counseling skills and ethical issues specific to LARC, such as removal when desired.[16] Clinicians received hands-on IUD training with models and implant trainings with the manufacturer. All sites maintained usual contraceptive costs and coverage.

Following training at intervention sites, we recruited patients from study clinics between May 2011 and March 2012 and followed them up for 1 year. Eligible women were aged 18–25 years, were sexually active, received contraceptive counseling, and did not desire pregnancy within a year.

At the 17 sites providing abortion care, patients were eligible to enroll on the day of an aspiration abortion or MAB initiation. After providing informed consent and receiving contraceptive counseling, participants completed a self-administered questionnaire documenting contraceptive history and methods discussed and chosen at the visit. Providers recorded abortion type and gestation on a visit summary.

Participants completed online or phone follow-up questionnaires quarterly for 1 year and did home urine pregnancy tests (AccuHome; Germaine Laboratories, San Antonio, TX) at 6 and 12 months. Participants received $20 per questionnaire and $30 per pregnancy test completed. Investigators conducted medical record reviews at year end.

Ethical approval was obtained from the Committee on Human Research of the University of California, San Francisco, and the Allendale Investigational Review Board.

Measures

Outcomes

We measured contraceptive counseling with baseline participant survey questions as to whether a nurse, doctor, or staff member had discussed each method during the abortion visit. We created a series of variables capturing methods discussed: long-acting and short-acting hormonal method (pills, transdermal patch, vaginal ring, and depot medroxyprogesterone acetate injection [DMPA]); condom; and none.

To measure the method choice, we asked which method, if any, participants decided to use after an abortion. We created a categorical variable (long acting, short acting, condom/none); the few women selecting more than 1 method were categorized according to the more effective method. We also examined counseling and choice of the IUD and, separately, the implant, given that provider counseling on, and patient preference for, the 2 methods might differ by abortion type.

We captured contraceptive methods actually initiated in 2 ways. First, to assess the most effective contraceptive method used within 3 months of enrollment, we used data from quarterly follow-up surveys assessing contraceptive method use in the preceding quarter. Data were available for participants completing at least 1 follow-up interview. Second, for the full sample, we used medical records data in addition to surveys to document IUD and implant placements over 1 year. Data on follow-up MAB visits within 7–28 days were also abstracted from medical records. Finally, we captured incident pregnancies using quarterly surveys, medical records, and urine pregnancy tests, dating them from the last menstrual period.

Independent variables

The primary independent variable was the participant's abortion type (medication, aspiration). All models included the study arm (intervention, control). We included baseline control variables selected a priori as associated with contraceptive use, including age, race/ethnicity, parity, and contraceptive use within 3 months of enrollment.

We also assessed how women would feel if they became pregnant within the year (very unhappy/unhappy, happy/very happy). Given prior analyses showing the importance of funding for LARC use,[13,17] we assessed participant health insurance (public [Medicaid, other state program], private, no insurance, do not know) as well as 3 site-level funding policy variables: whether the site was in a state with a family-planning Medicaid expansion program, Medicaid coverage of abortion, and mandated private insurance contraceptive coverage.[18]

We also examined whether the site provided immediate postaspiration abortion LARC. To investigate whether differences in contraception by abortion type might be attributable to patient preferences around pelvic examinations (which might affect choice of both contraception and MAB), we asked participants whether they had ever postponed going to a clinic for birth control to avoid a pelvic examination.

Analysis

We investigated baseline differences in participant characteristics by abortion type using regression with generalized estimated equations (GEE) for clustering, with robust SEs. The model link depended on the measure of the characteristic (eg, a logit link was used for dichotomous characteristics). To examine contraceptive methods discussed in counseling by abortion type,

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