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Immediate placement of intrauterine devices after first and second trimester pregnancy termination☆

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Abstract

Background: We reviewed our experience with intrauterine device (IUD) placement after surgical abortion up to 20 weeks' gestation.
Study Design: Women presenting for elective abortion between January 2004 and March 2009 who requested an IUD were included in this retrospective review.
Results: Of 308 women requesting postabortion IUD placement, 221 (72%) planned insertion at the time of abortion (immediate group) and 87 (28%) planned insertion at their postoperative visit (interval group). IUDs were placed in 96% of the immediate group and in 23% of the interval group (212/221 vs. 20/87; p<.0001). Failure to return for placement was the most common reason for noninsertion in the interval group (60/87=69%). Follow-up information was obtained for 56% of patients and was documented a median of 137 days postabortion (range 3–1594 days). There was no difference in complication rates between groups. Expulsion rates were 3% and 0% in the immediate and interval groups, respectively (6/212 vs. 0/20; p=.4). Considering only those with documented follow-up after immediate insertion (119), there was a nonsignificant trend towards increased expulsion with placement after second vs. first trimester abortion (4/54=7% vs. 2/65=2%; p=.3). When analyzing the 172 subjects with documented follow-up, those planning immediate insertion were more likely to have an IUD in situ at the last contact than those planning later insertion (84/124=68% vs. 20/48=42%; p=.002).
Conclusion: Immediate postabortion IUD insertion is safe and effective. Given the low rate of return for interval insertion, immediate placement may be preferable.

Keywords: Postabortion contraception; Postabortal; Intrauterine contraception; Intrauterine device; IUD; Immediate insertion

1. Introduction

Almost half of the 1.2 million abortions performed annually in the United States (US) occur in women who previously have terminated a pregnancy [1]. Long-acting reversible contraceptive methods have the potential to decrease future unplanned pregnancies and repeat abortions in women presenting for pregnancy termination. While the intrauterine device (IUD) is a highly effective long-term option, its use for immediate postabortion contraception, especially after second trimester terminations, has been limited.

Although IUD insertion is often delayed 2–8 weeks after an abortion (interval insertion), insertion immediately at the time of elective pregnancy termination (immediate insertion) has several advantages [2]. The cervix is already dilated; thus IUD placement may be easier and less painful. Since follow-up rates after elective abortion are commonly low, immediate IUD insertion assures that the patient has effective contraception without an additional visit [2–4]. Also, postabortal insertion has been associated with a decrease in the rate of repeat abortion [5,6].

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Perceived disadvantages of immediate insertion include increased risk of infection, uterine perforation and device expulsion; however, the literature demonstrates that infection and uterine perforation rates are not increased by immediate insertion [2]. Expulsion risk may be theoretically increased secondary to cervical dilation at the time of surgery and subsequent uterine involution. Published expulsion rates of T-shaped IUDs inserted immediately after first trimester abortion vary from 1% to 15% [6–9]. There is minimal data comparing immediate to interval IUD insertion, especially after second trimester dilation and evacuation. There has been only one published randomized trial comparing immediate to interval insertion after suction abortion, and it found a statistically nonsignificant increase in expulsion rate from 3% vs. 15% following interval vs. immediate placement (p=.2).

Limited data suggest that IUD placement immediately after second trimester abortion has a higher rate of expulsion than after first trimester procedures. A 1979′s World Health Organization (WHO) trial of immediate postabortal insertion found that the expulsion rate for a copper T-shaped IUD at 120 days postinsertion was 1.9% following first trimester abortion and 19.5% following second trimester procedures [10]. Goodman et al. [6] reported expulsion rates of 1.6% and 7% for IUDs placed immediately after first and second trimester abortions, respectively (p=.02). A recent cohort series published by Drey et al. [8] found a nonsignificant increase in expulsion rates with immediate placement of IUDs after second vs. first trimester abortions (3% vs. 0.8%).

We have been placing IUDs immediately after first and second trimester surgical abortions at our institution since 2004. The purpose of this study was to examine the risks and benefits of immediate vs. interval IUD insertion after elective abortion, particularly after second trimester procedures.

2. Materials and methods

The primary objective of this study was to compare IUD insertion rates associated with placement immediately after elective surgical abortion (immediate group) vs. delayed insertion 2–4 weeks later at the time of surgical follow-up (interval group). Secondary objectives were to compare expulsion rates in the immediate group after first and second trimester abortion and to assess continuation, removal and complication rates in both groups.

Our clinic's practice of postabortion IUD insertion is described below. The copper-T380A (ParaGard®, Teva Pharmaceuticals, Pomona, NY, USA) and the levonorgestrel intrauterine system (Mirena®, Bayer Healthcare Pharmaceuticals, Inc., Wayne, NJ, USA) are available. Patients desiring an IUD are offered immediate and interval insertion. Immediate insertion is recommended unless the patient is unsure of her contraceptive choice, there are signs of cervicitis or if insurance plan preauthorization is required and cannot be attained prior to the procedure. Timing of insertion is determined by the patient after counseling with the above considerations. Abortions are performed under intravenous conscious sedation and local anesthesia in our hospital-based clinic. The use of misoprostol with and without osmotic dilators for cervical priming varies by clinician and gestational age. Routine cervical screening for gonorrhea and chlamydia by nucleic acid amplification is performed at the preoperative visit unless results from recent testing are available. Since the preoperative visit is scheduled the day prior to the abortion, results from cervical screening performed at that visit are commonly unavailable at the time of surgery. Patients are prescribed doxycycline 100 mg twice daily for 3–7 days according to clinician discretion for procedure prophylaxis. They are subsequently treated with doxycycline, azithromycin and/or ceftriaxone according to Centers for Disease Control guidelines if cervical screening results are positive. IUDs are not removed for positive culture results in asymptomatic patients. If the insertion device is not long enough to reach the fundus at the time of placement, additional instruments (most commonly sponge forceps) are used to assure fundal placement of the IUD using techniques described elsewhere [8]. The use of ultrasound guidance varies amongst our clinicians in the first trimester but is standard for immediate IUD placement following second trimester abortion. Postsurgical follow-up is scheduled in 2–4 weeks. Those in the interval group are asked to return to have their IUD checked 4–6 weeks after insertion. No further routine follow-up is scheduled; however, patients are encouraged to return for any problems.

Women presenting for elective abortion between January 2004 and March of 2009 who desired an IUD and intended to follow up within our medical system were included in this retrospective record review. Women with fetal demise or fetal anomalies were excluded since most did not desire long-term contraception and planned to follow up with their primary obstetrician. Records were reviewed in the Spring of 2009, 3 to 60 months postoperatively. Subjects were identified from the procedure ledger in our clinic. All available electronic records dating back to the time of the abortion were reviewed. Gynecology clinic charts for all subjects were reviewed for verification and to obtain missing data. This review was approved by the Institutional Review Board of the Johns Hopkins University School of Medicine.

For the purpose of this retrospective analysis, postoperative infection was defined by the prescription of additional broad-spectrum antibiotics. Retained products of conception (RPOC) were defined by clinical suspicion and treatment with misoprostol or reaspiration. Second trimester abortion was defined as those performed at greater than or equal to 14 weeks' gestation.

Data were abstracted onto coded forms and were entered into Microsoft Access and Excel files, and were then analyzed using Stata 10 (College Station, TX, USA). Statistical tests included Fisher's Exact Test for categorical data, Student's *t* test for continuous data and nonparametric statistics where appropriate. A two-sided p value of .05 was considered statistically significant.