

EFFICACY AND SAFETY OF INTRA CAESAREAN IUCD

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Abstract: *The objective of this study was to evaluate the effectiveness and complications of post-partum intrauterine contraceptive device (PPIUCD) insertion during cesarean delivery. The study was conducted at Nishtar Medical Hospital from June to December 2022. A total of 150 women were included in the study. In the first phase, medical eligibility for the intervention was assessed, while in the second phase, WHO Medical Eligibility Criteria were evaluated. The IUCD was manually inserted after delivery with its string towards the cervix. The patients were followed up at 2 and 6 months. After 6 months, 9 (6%) cases reported abdominal pain, 22 (15%) had menorrhagia, and 23 (15.3%) had missed threads with the IUCD in place. None of the patients reported pregnancy or perforation of the uterus. After 6 months, 133 (88.6%) patients continued to use this method of contraception, while 9(6%) were lost to follow-up, 4 (2.6%) had the device removed due to complications, and 4 (2.6%) had spontaneous expulsion. The study concluded that PPIUCD is a safe and effective long-term contraceptive method. Clinicians should evaluate patients' eligibility for PPIUCD and counsel women on adopting this method.*

Keywords: Post-Partum Intrauterine Contraceptive Device, Contraception, Cesarean Delivery.

Introduction

Unintended pregnancies lead to negative maternal outcomes. Research shows that in women aged 15 to 45, there are approximately 144.5 pregnancies/per 1000 women, of which 70.2 are unintended (Hanson et al., 2015). There are limitations regarding administering post-partum contraception (Wouk et al., 2021), so some contraception should be given after delivery before discharge.

Post-partum intrauterine contraceptive devices (PPIUCD) in Pakistan became popular during the last decade (Nisar et al., 2020). Immediate insertion of post-partum IUCD after cesarean delivery causes minimal discomfort and gives long-term contraception (Kanakuze et al., 2020). A study comparing nonintervention subjects with those who received PPIUCD at caesarean section reported that PPIUCD has few complications and no difference regarding infection or puerperal morbidity (Giovannelli et al., 2022). There is a scarcity of local data on this subject, so we conducted this study to assess the complications and efficacy of intra-caesarean post-partum intrauterine contraceptive device insertion.

Methodology

The prospective study was conducted in Nishtar Medical Hospital from June 2022 to December 2022. Patients aged 18 to 45 years who were candidates for PPIUCD were included in the study. Those with congenital uterine anomalies, AIDS, intrapartum fever, genital cancerous lesions, post-partum hemorrhage, and amniotic membrane rupture for > 18 hours were excluded. A total of 150 women were included in the study. Informed consent of the participants was taken. The ethical board of the hospital approved the study.

All participants were informed about the intervention. Candidates were assessed in two phases. In the first phase, medical eligibility for the intervention was assessed, while in the second phase, WHO Medical Eligibility Criteria were assessed (Jakhar and Singhal, 2019). Detailed history including age, education, socio economic status, obstetric history and details of current delivery were recorded. The intrauterine device was inserted manually after the delivery with its string towards the cervix. After insertion, patients were shifted to the post-operative ward, followed up and counseled about the device's working. Patients were followed up at 2 and 6 months.

Results

The mean age of the participants was 24.78 ± 3.58 years. 115 (76.6%) cases were gravid 2. 93 (62%) cases were of elective lower cesarean segment. 148 (99%) cases were from the middle and lower classes, and 88 (58.6%) were illiterate.

142 (95.6%) patients came on the first follow-up visit, 141 (94%) came on the second visit, and the remaining were lost to follow-up. Details of follow-up are shown in table I. Regarding complications, after 6 months, 9 (6%) cases had abdominal pain, 22 (15%) had menorrhagia, and 23 (15.3%) had missed thread with IUCD in situ. None of the patients reported pregnancy or perforation of the uterus (Table II). After 6 month period, 133 (88.6%) patients continued using this method of contraception, 9(6%) were lost to follow-up, 4 (2.6%) removed the device because of some complications, and 4 (2.6%) had spontaneous expulsion. Common reasons for removal included menorrhagia, abdominal pain, disappointing relatives, and misconceptions regarding IUCD. Patient compliance at 2 and 6 months is summarized in Table III.

Table I Details of follow up

Follow up	Total cases	Individual follow up	Telephonic follow-up
2 months	142 (95.6%)	29 (20.4%)	113 (79.5%)
6 months	141 (94%)	46 (32.5%)	95 (67.3%)

Table II Post-procedure complications

Complications	At 2 months	At 6 months
Perforation	0	0
Infection	0	0
Expulsion	2 (1.3%)	4 (2.6%)
Removed	1 (.6%)	4 (2.6%)
Abdominal pain	27 (18%)	9 (6%)
Bleeding	33 (22%)	22 (15%)
Misplaced thread	45 (30%)	23 (15.3%)

Table III Patient compliance

Compliance	At 2 months	At 6 months
Good	79 (52.6%)	22 (14.6%)
Average	58 (38.6%)	45 (30%)
Excellent	1 (.6%)	66 (44%)

Discussion

Despite safety reports of intra-cesarean IUCD, this method is not widely used in women undergoing cesarean delivery. This study assessed the complications and efficacy of intra-cesarean post-partum intrauterine contraceptive device insertion. The mean age of the participants was 24.78 ± 3.58 years. This aligns with the previous study, which reported a mean age of 23.13 ± 2.52 years (Seleem et al., 2023). Another similar study also reported mean age to be 26 years (Iftikhar et al., 2019). In the current study, 76.6% of cases were gravid 2, similar to the previous study, which reported that 7es were gravid 2 (Akdemir and Karadeniz, 2019).

In the current study, 142 (95.6%) patients came on the first follow-up visit, 141 (94%) came on the second visit, and the remaining were lost to follow-up. A previous study showed that 79.1% of women came for the first follow-up at 6 weeks, and only 11.4% came for the second follow-up at 6 months. These findings contrast the results of our study (Kanakuze et al., 2020). Another study showed that 49% of women for follow-up at 6 weeks and 48% were contacted on the telephone at 6 months (Zaconeta et al., 2019).

In the current study, no major complaint was reported except in 15.3% of cases in whom thread was missing, but radiographs confirmed in situ IUCD, 6% of cases had abdominal pain, which NSAIDS managed, and 15% had menorrhagia which was managed conservatively. 2.6% of cases had spontaneous expulsion of IUCD. There were no reports of perforation or pregnancy. A previous study showed that in 5.1%, IUCD was removed due to menstrual abnormalities, 2.7% due to medical reasons, and 2.7% spontaneous expulsion (Hofmeyr and Kime, 2023). Another study reported that 17.5% of patients had expulsion, and 8.1% had removal because of pain and bleeding (Dayer et al., 2023). Another study reported that at 6 months of follow-up, 10.6% of patients had expulsion, and 27.4% had menorrhagia (Gupta et al.). The current study's continuation rate at 6 months follow-up was 88.6%. A previous study reported continuation rate at 6 and 12 months was 81.2%, respectively (Neelum et al., 2022). A similar study reported that at 6 months follow up 54%, 38% as 1% people had

average, good and great compliance respectively (Chattopadhyay et al., 2021).

Conclusion

PPIUCD is a safe and effective method for long-term contraception. Clinicians should assess patients' eligibility for PPIUCD and counsel women to adopt this method.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate

Not applicable

Consent for publication

Not applicable

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Not applicable

Conflict of interest

The authors declared absence of conflict of interest.

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