

ORIGINAL ARTICLE

In A Tertiary Care Hospital, the Use of A Postpartum Intrauterine Contraceptive Device as A Method of Contraception

SHAZIA ASHRAF¹, MUNAZZAH BASHIR², RUBINA TAZAYYEN YOUSAF³¹Associate Professor, Department of Gynae & Obs, AIMC / Jinnah Hospital, Lahore²Assistant Professor Gynae and Obstetrics M. Islam Medical College, Gujranwala³Professor of Gynaecology, University College of Medicine and Dentistry Lahore & HOD Gynae at Alkhidmat Teaching Hospital Mansoorah, LahoreCorrespondence to: Shazia Ashraf, Email: shaziaashraf786@hotmail.com, Cell: 0322-792221**ABSTRACT**

Objective: Aim was to assess the acceptability, safety, and efficacy of a post-partum intrauterine contraceptive device among patients.

Study Design: Prospective observational study

Place and Duration: AIMC / Jinnah Hospital, Lahore for the duration from January 2022 to August 2022.

Methods: Total 190 pregnant women of age 18-42 years were presented in this study. After receiving informed written consent, gestational age, BMI, parity, socioeconomic status, and age were determined. All the patients received postpartum intrauterine contraceptive device (PPIUCD) either of normal vaginal delivery or C-section. Outcomes were assessed in terms of safety and efficacy among all cases. Frequency of complications among all cases were assessed.

Results: There were 125 (65.8%) cases had age 18-30 years and 65 (34.2%) females had age 31-42 years. 110 (57.9%) cases had BMI <25kg/m² and 80 (42.1%) females had BMI >25kg/m². Majority of the females 145 (76.3%) were multigravida. Mean gestational age of the females was 37.2±13.89 weeks. There were 95 (50%) cases had poor socio-economic status. We inserted PPIUD in 128 (67.4%) cases of vaginal delivery and 62 (32.6%) cases of C-section after delivery. Adverse outcomes were found in 16 (8.4%) cases in which 4 cases were of expulsion of PPIUD, heavy vaginal bleeding in 9 females and 3 cases had infection. There was no any case found of perforation among all cases.

Conclusion: In this study, we came to the conclusion that postpartum implantation of an intrauterine contraceptive device is an efficient, secure, reversible, and long-acting form of contraception.

Keywords: PPIUCD, Normal Delivery, C-section, Complications

INTRODUCTION

In the first year following birth, postpartum family planning works to avoid unexpected and closely spaced pregnancies. Unplanned pregnancies are more likely to occur during the postpartum period, which increases the risk of outcomes including abortion, early labour, postpartum haemorrhage, low birth weight babies, foetal loss, and mother mortality [1,2].

Only the postpartum intrauterine contraceptive device (PPIUCD) is a very effective, dependable, affordable, non-hormonal, instantly reversible, and long-acting contraception that may be started during the immediate postpartum period and has no adverse effects on nursing [1-3]. By reducing the financial, psychological, obstetric, and other health-related difficulties connected to closely spaced pregnancies, PPIUCD can improve the health of mothers and children [1]. There is no need for ongoing medical check-ups for contraceptive refills after immediate PPIUCD insertion [4]. In contrast to delayed postpartum and interval IUCD insertion, instant PPIUCD insertion is simple and safe [5] and may be started by a mid-level trained delivery attendant [6].

Family planning, which occurs when couples space out their pregnancies by more than two years, can save one-third of maternal fatalities and 10% of infant mortality. High mother and infant mortality rates are associated with birth intervals that are too close together. [7] Pregnancies occurring within 24 months after the previous delivery have a greater risk of early labour, miscarriages, low birth weight infants, postpartum haemorrhage, and foetal loss than those occurring outside of that time frame. The National Family Health Survey (NFHS) conducted in India in 2005–2006 found that 22% of married females had unmet family planning needs, and that 61% of births occurred at intervals of less than three years. In the first year after giving birth, 65% of Indian women have an unmet need for contraception for family planning. The implantation of a PPIUCD (post-placental intrauterine contraceptive device) is a practical, secure, and efficient means of post-partum contraception. [8] The placement of an intrauterine device (IUD) right away after the placenta has been removed has not been linked to uterine subinvolution, an increased risk of uterine perforation, postpartum haemorrhage, or an increased risk of infection. [9] When compared to insertion at a 4–8-week interval,

it was shown that the expulsion rate was greater when the PPIUD was put in right away.

Long-acting, extremely safe, and efficient contraception is provided via IUDs. IUD implantation as a post-partum procedure has been researched all over the world since the 1960s and has gained acceptance. Where women have access to medical care, IUD delivery offers a substantial possibility for the need for contraception. In the first year after giving birth, post-partum family planning is acceptable to prevent closely spaced and unplanned births. [9] An unintended pregnancy within a short period of time can be avoided with the use of effective contraceptive techniques. [10]

Globally, 64% of married or in-union women of reproductive age used some kind of contraception in 2015. Contraception usage was, however, far less common (40%) in the least developed nations, with Africa having the lowest rates (33%). Worldwide, it is estimated that in 2015, 12% of married or in-union women had unmet family planning needs; in other words, they desired to delay or stop having children but were unable to do so using any kind of contraception. According to the WHO data from 2015, India uses contraceptive methods between 50 and 70 percent of the time, with a median of 59.8%, and there is a 13.1% unmet demand for contraception. IUD usage makes about 2% of the use of the various forms of contraception. [11]

A contemporary technique of contraception is the postpartum intrauterine device (PPIUCD). Long-lasting and reversible is PPIUCD. It can be given to the patient before they leave the hospital and does not interfere with breastfeeding.

Intrauterine contraceptive device (IUCD) insertion is best done in the early postpartum period since women are more open to using it then. They are driven to choose any approach since they have just through a difficult pregnancy and labour. Due to a variety of issues, they frequently miss follow-up appointments and have restricted access to treatment. Only while in labour or during the prenatal period do they visit the hospital. When they decide to implant interval IUCDs after six weeks, some of them are already pregnant. Early postpartum is a difficult time to choose a dependable form of contraception, especially if the mother is nursing because hormonal techniques are not recommended for her. 8 Inserting an IUCD right away after delivery is a good intervention since it is secure, long-lasting, economical, coitus-

independent, quickly reversible, and does not interfere with nursing. It is practical for the service provider and saves them the extra money associated with a follow-up visit.

Additional benefit is that continuity of care is practised since the person providing contraception is someone the woman is familiar and at ease with and who is also participating in intrapartum care. The avoidance of unplanned and closely spaced pregnancies within the first year following childbirth is the main goal of postpartum family planning (PPFP), according to the World Health Organization (WHO). In 2012, in association with Jhpiego, PPFP was first implemented in Pakistan. With 52% of births taking place in facilities in Pakistan, this initiative has a great chance of becoming a great success in easing the load of population on the nation. [12] Egypt, India, Nigeria, Paraguay, and Turkey are just a few of the nations where PPFP is firmly established. Postpartum IUCD (PPIUCD) as a form of contraception has been shown to be safe, effective, and widely accepted in studies from these nations. [13-15] According to these research, expulsion rates ranged from 3.8% to 12%. Evidence for the safety and viability of PPIUCD implantation is also provided by Cochrane reviews. 15,16 Despite several attempts, Pakistan did not meet Millennium Development Goal (MDG) 5. Family planning needs are increasing and the CPR is falling behind.

The goal of this study is to determine whether PPIUCD is user-acceptable, safe, and effective.

MATERIAL AND METHODS

This prospective/observational study was conducted at AIMC / Jinnah Hospital, Lahore from January 2022 to August 2022. and comprised of 190 females. After receiving informed written consent, gestational age, BMI, parity, socioeconomic status, and age were determined. Females who agreed to have a postpartum intrauterine contraceptive device implanted but who also had postpartum haemorrhage, pre-labor membranes that ruptured for longer than 18 hours, obstructed labour, chorioamnionitis symptoms, severe anaemia (Hb7g/dl), a distorted uterine cavity (fibroid uterus or congenital anomaly), or an active genital tract infection were not implanted

The approach of non-probability sequential sampling was applied. All women visiting the study's prenatal clinics received information on several contemporary methods of contraception after providing informed, signed consent. Both the patient and her partner gave their approval during the prenatal period and at the moment of birth. IUCD, Implant, Injectables, Contraceptive Pills, and Tubal Ligation are just a few of the contemporary contraceptive choices available to women. Women who choose to have an intrauterine contraceptive device implanted after giving birth were included in the decisions that were made.

Within ten minutes of placenta delivery, a Cu IUCD was implanted. Cu IUCD was inserted vaginally at the uterine fundus in women who gave birth vaginally by holding it in Kelly's forcep. Cu IUCD was implanted through a surgical procedure at the uterine fundus through a lower segment transverse incision, and a thread was inserted through the cervix. In all situations, it was suggested to the patient to check up after 6 weeks and the thread was severed. Assessments for perforation, infection, and significant vaginal bleeding were used to establish safety. The SPSS 24 programme was used to enter and evaluate the data. Categorical data were reported in percentages, whereas continuous variables were presented using MeanSD.

RESULTS

There were 125 (65.8%) cases had age 18-30 years and 65 (34.2%) females had age 31-42 years. 110 (57.9%) cases had BMI <25kg/m² and 80 (42.1%) females had BMI >25kg/m². Majority of the females 145 (76.3%) were multigravida. Mean gestational age of the females was 37.2±13.89 weeks. There were 95 (50%) cases had poor socio-economic status.(table 1)

Table-1: Demographics of the enrolled cases

Variables	Frequency	Percentage
Mean gestational age (weeks)	37.2±13.89	
Age		
18-30 years	125	65.8
30-42 years	65	34.2
Body Mass Index		
<25kg/m ²	110	57.9
>25kg/m ²	70	42.1
Gravida		
Multi-gravida	145	76.3
Primigravida	45	23.7
Socio-economic status		
Poor	95	50
Middle	55	28.9
High	40	21.1

We inserted PPIUD in 128 (67.4%) cases of vaginal delivery and 62 (32.6%) cases of C-section after delivery.(figure 1)

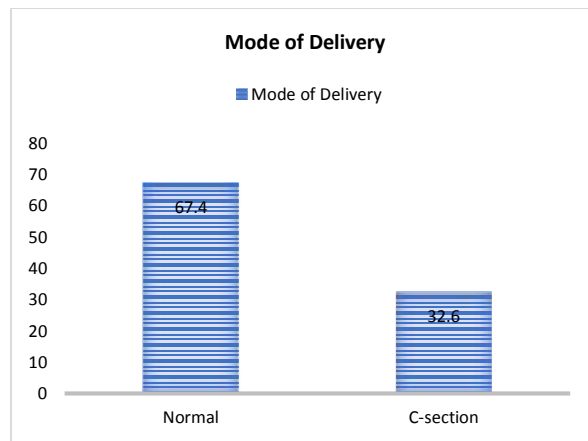


Figure-1: Mode of delivery among all cases

Adverse outcomes were found in 16 (8.4%) cases in which 4 cases were of expulsion of PPIUD, heavy vaginal bleeding in 9 females and 3 cases had infection.(table 2)

Table-2: Frequency of complications after PPIUCD Insertion

Variables	Frequency	Percentage
Complications		
Yes	16	8.4
No	174	91.6
Types of Complications		
Expulsion of PPIUCD	4	2.1
Vaginal Bleeding	9	4.7
Infection	3	1.6

DISCUSSION

The majority of women were happy with their decision to use PPIUCD as contraception, according to our research of PPIUCD insertion at a tertiary care facility. It is a procedure that the WHO [16] recommends since it is secure, efficient, and reversible. The non-hormonal contraceptive PPIUCD is secure while breastfeeding. [17] The immediate postpartum period presents an excellent chance since women are very motivated to utilise contraceptives during this time, and lochia can disguise frequent adverse effects including lower abdomen discomfort and vaginal bleeding. Sometimes it is the only opportunity a woman has to interact with a healthcare professional in poor nations like Pakistan. These women could get pregnant again if effective contraception is delayed for six weeks. [18]

In current study 190 pregnant females were presented. There were 125 (65.8%) cases had age 18-30 years and 65 (34.2%) females had age 31-42 years. 110 (57.9%) cases had BMI <25kg/m² and 80 (42.1%) females had BMI >25kg/m². Results

were in line with the previous study.[19] Majority of the females 145 (76.3%) were multigravida. Mean gestational age of the females was 37.2 ± 13.89 weeks. There were 95 (50%) cases had poor socio-economic status. In previous study of Rehman M et al, 84.8% females were multi-gravida and only 15.2% were primigravida.[20] The results of the current study also indicated that PPIUCD was significantly affected by partner or spouse endorsement of IUCD use. If their spouses or partners approved of their use of IUCDs, women were more likely to do so than women without family support. Positive correlations were found between the mother's educational level and her use of PPIUCD. In comparison to their peers, women who attend secondary school are more likely to use PPIUCD. The results of this study and those conducted in India [22] and Uganda [21] are comparable.

We inserted PPIUD in 128 (67.4%) cases of vaginal delivery and 62 (32.6%) cases of C-section after delivery. Adverse outcomes were found in 16 (8.4%) cases in which 4 cases were of expulsion of PPIUD, heavy vaginal bleeding in 9 females and 3 cases had infection. In a study done by Welkovic et al., they compared the prevalence of significant bleeding and infection in patients who accepted PPIUCD with that of patients who rejected PPIUCD and found no difference. [17] Similar findings were obtained from a different research that compared PPIUCD implantation during the early postpartum period with that during the immediate postplacental phase. [23] According to a research done in India, 65 people had it removed, and 283/1307 women had severe menstrual flow. [24]

Expulsion rates were 5.33% according to a research by Singal et al. in India. [25] None of the individuals in the current research wanted their PPIUCD removed after it was implanted. Patients were pleased and wanted to keep taking it as a form of contraception. In our investigation, no individuals with in situ PPIUCD reported being pregnant. The study is limited by its short follow-up duration and small sample size. It is a reliable, secure, reversible, and long-acting form of contraception to put an intrauterine device after giving birth. Similar to tubal ligation in terms of effectiveness is this technique. This should be made available as a form of contraception to patients having caesarean procedures. It might be a useful form of contraception in nations like Pakistan where giving birth may be the only time a woman interacts with a healthcare professional. Large-scale education on PPIUCD should be given to women. Identification of cases of IUCD expulsion requires early follow-up.

CONCLUSION

In this study, we came to the conclusion that postpartum implantation of an intrauterine contraceptive device is an efficient, secure, reversible, and long-acting form of contraception.

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