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Study the efficacy and compliance of postpartum intrauterine device

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Abstract
Background: The postpartum phase is crucial in a woman's life since it necessitates the care of her newborn as well as the prevention of undesired pregnancies. This is the time of year when women are most likely to seek contraceptive counsel and have unmet contraception needs addressed. Postpartum IUCD is long-acting contraception that can be used right after a baby is born or within 48 hours.
Aim: This study aims to look at the efficacy and patient compliance with the Postpartum Intrauterine Device.
Materials and Methods: This study is a retrospective study conducted in a tertiary health care center from November 2018 to November 2019.
Results: PPIUCD patients councilled were 2000. 500 patients were the number of patients who accepted service and participated in the study. The average age of those who accepted the facility was 21-25 years old, and 53.4 percent were second-time mothers who had their second kid sooner than expected. 86.6 percent of the patients were educated, demonstrating the importance of female education on contraception. Because of the surgical delivery, 59 percent of patients opted intracasarean PPIUCD to extend the next conception. The choice of this method was based on the fact that it did not require a second visit for contraception and had no hormonal side effects. Despite counseling 2000 patients, only 500 chose this strategy, owing to the fact that they were not accompanied by partners and were unable to make decisions. After 6 weeks of follow-up, 75 percent of patients had no complaints, whereas 96.4 percent of patients had no complaints after 6 months. There was not a single infection or perforation patient. Seven patients were expelled after six weeks, while two patients were expelled after six months. Only 14 patients requested PPIUCD removal.
Conclusion: PPIUCD is a highly effective, nonhormonal, long-acting, and reversible contraceptive method. To increase the use of this method, extreme motivation and counselling from the couple's antenatal period are required.

Keywords: Intrauterine device, postpartum, contraception

Introduction
In the year 2000, India's population surpassed one billion people. India's population reached 121 crores in the 2011 census, and it is expected to reach 1.53 billion by 2050, making it the world's most populous country [1, 2]. India's national population policy was created in 2000 with the long-term goal of stabilizing the population by 2045, in line with the needs of long-term economic growth and social development. One of the priorities is to meet the unmet contraception need. A high percentage of postpartum women wish to use a contraceptive technique to control their fertility, either by spacing or limiting future pregnancies [3]. IUCDs are one of the most regularly used reversible contraceptive methods among women of reproductive age all over the world. IUCDs are used by one in every five married contraceptive users (153 million). PPIUCD looks to be a great way to space out births [4, 5]. As a result, this study was designed to reduce the risk of poor outcomes such as postpartum hemorrhage, early labour, low birth weight babies, and maternal death from unplanned pregnancies. The term "unmet need" refers to the discrepancy between women's reproductive intentions and contraception use. Within 48 hours of childbirth, immediate postpartum occurs, while early postpartum occurs within 7 days. This study aims to look at the efficacy and patient compliance with the Postpartum Intrauterine Device.

Materials and Methods
This study is a retrospective study conducted in a tertiary health care center from November 2018 to November 2019. A total of 500 patients were selected in the study who were inserted

with postpartum intrauterine contraceptive device (380 A intrauterine copper device). The criteria for inclusion were regardless of age or parity, all women who took part in the trial had a postpartum IUCD implanted. All patients with a type of insertion described as post placental, postpartum (within 48nhrs) and intra caesarean section had their written information obtained. The criteria for exclusion were PROM should be extended for at least 18 hours. A severe form of antepartum bleeding, established chorioamnionitis HIV + women with a CD4 count of less than 200/cmm who is not on ART, any active genital tract infection in the third trimester, heart disease, severe anemia, the patient refuses postpartum IUCD despite having a known uterine abnormality. The IUCD is inserted quickly after the placenta is expelled, even before the episiotomy is sutured. Before inserting a post placental IUCD, active management of the third stage of labor is required. Kelley's forceps, which are devoid of lock and have a particular curvature at the proximal end to facilitate the angulation while entering the uterus, is used. The 380A IUCD was used and was inserted at the fundus after pulling the fundus up and straightening the uterine axis. In Postpartum IUCD, the IUCD is introduced into the fundus using hands within 48 hours following birth and during LSCS. The IUCD thread is directed towards the lowest portion. All patients are issued a PPIUCD client card with their information such as name, age, registration number, address, phone number, and any complaints. After one and a half months, patients are followed up. The patient's complaints are recorded. Appropriate antibiotics and tranexamic acid were used to treat white discharge, excessive bleeding. The patients were followed up on phone and after 6 months.

Results: Total number of patients delivered in the study was 5000. Patients fulfilling medical eligibility criteria were 2600. PPIUCD patients councilled were 2000. 500 patients were the number of patients who accepted service and participated in the study.

Table 1: Distribution based on the age of patients

Age (Years)	Number of patients	Percentage
14-20	82	16.4
21-25	270	54
26-30	96	19.2
31-36	35	7
>36	17	3.4
Total	500	100

Table 1 shows that the maximum number of patients were in the age group of 21-25 years and constituted 54%.

Table 2: Distribution based on parity

Parity	Number of patients	Percentage
Primi	143	28.6
Second	267	53.4
Third	78	15.6
Fourth	12	2.4
Total	500	100

Table 2 shows that the highest number of patients were in the second parity (53.4%).

Table 3: Distribution based on education

Education	Number of patients	Percentage
Uneducated	67	13.4
Up to 10th standard	287	57.4
Up to 12th standard	69	13.8
Graduation	42	8.4
Post-graduation	35	7

Table 3 shows that majority of patients were educated up to the 10th standard (57.4%).

Table 4: IUCD acceptance reasons

Reasons	Number of patients	Percentage
Start with immediate contraception	30	6
No need for 2nd visit for contraception	268	53.6
Least compliance required	45	9
Faith in doctor	45	9
Previous use of IUCD	33	6.6
Previous use of other contraception that failed	24	4.8
Knowledge gained from media, neighborhood	19	3.8
Cost-effective	36	7.2

Table 4 shows that the majority of patients had IUCD acceptance reason of no need for 2nd visit for contraception (53.6%).

Table 5: PPIUCD not accepting reasons despite counseling

Reasons	Number of patients	Percentage
Not able to take the decision	900	48
Fear	360	19.2
Risk of perforation	320	17.1
The belief in sex interference	98	5.2
The myth that it is a permanent method	35	1.9
Want permanent contraception later	44	2.3
Not happy with previous IUCD	22	1.2
Could not define	59	3.1
Never heard of PPIUCD ever	37	2

Table 5 shows that majority of patients were not able to make decisions (48%).

Table 6: Complication in patients in present study on followup

Reasons	At 6 weeks	Percentage	At 6 months	Percentage
No complaints	375	75	482	96.4
Excessive white discharge	25	5	7	1.3
Excessive PV bleeding	26	5.2	7	1.3
Thread not come out	56	11.2	3	0.6
Expulsion	7	1.4	2	0.4
Infection	0	0	0	0
Pain in the lower abdomen	11	2.2	0	0
Perforation	0	0	0	0

300 patients were from urban area (60%) and 200 patients were from rural area (40%). PPIUCD types were post intra caesarean (295,59%), placental (107,21.4%) and postpartum (98, 19.6%). 14 patients requested for PPIUCD removal.

Discussion

Services for postpartum family planning are an excellent way to reorient family planning. It has been demonstrated that the vast majority of women are not ready to have another child for at least two years [6]. The provision of high-quality family planning services in the postpartum period has the potential to reduce the voluntary termination of unwanted pregnancies, as well as maternal and child mortality and morbidity resulting from unsafe abortions and insufficient birth spacing, respectively [7, 8]. Although geographic access to services remains a barrier in many situations, the primary causes for nonuse are a lack of understanding, fear of side effects, and social and familial rejection. The goal of our research is to help patients who are using long-acting reversible contraception right after childbirth. The age group that benefited from PPIUCD in our study was 21-25 years old. In India, the optimum age for marriage is between 19 and 23, hence 80-90 percent of women conceive in the same age group. Using a permanent way rather than a temporary method has a greater influence as one's age or parity increases. With at least one living issue (31.5 percent), the acceptance rate rises, and with a second issue, the percentage rises even more (55 percent.) 300 patients were from urban areas (60%) and 200 patients were from a rural area (40%). This demonstrates that women's access to contraception and information improves as a result of urbanization and education. Similar results were observed in Dr. Srivasthav R *et al*. study [9]. In the present study, PPIUCD types were post intra caeserean (295,59%), placental (107,21.4%) and postpartum (98, 19.6%). 14 patients requested PPIUCD removal. In VD mule *et al*. study [10], 72.5 percent of patients had intra caesarean surgery, 22.5 percent had post placental surgery, and just 5% had immediate postpartum surgery. The exact explanation for the increased preference for intra caesarean delivery could not be pinpointed, although the risk of an early next pregnancy due to the scarred uterus was a major factor. Similar results were observed in Dr. Reetu Hooda *et al*. [11] study. The arguments for accepting PPIUCD were reasonable, such as no need for follow-up, no sex or breastfeeding restrictions. Patients in the second stratum were 53.4 percent more likely to use long-acting contraception because they had their second child within two years. Only 6% of patients were aware of PPIUCD; the remaining patients needed to be strongly counseled for its benefits. During follow-up, 75% of patients had no problems after 6 weeks, and 96.4% had no complaints after 6 months. Seven patients were expelled in six weeks, while two were expelled in six months. In six weeks, 1.4 percent of students were expelled. Similar results were observed in VD mule *et al*. study [10], it was observed that during follow-up, 72% of patients had no problems after 6 weeks, and 95% had no complaints after 6 months. Six patients were expelled in six weeks, while one was expelled in six months. In six weeks, 1.5 percent of students were expelled. Similar results were observed in Sujnanendra Mishra *et al*. [12] study. This was lower than multi-country research conducted in Blanchard H *et al*. study [13], which found a rate of expulsion ranging from 4.6 to 16.0 percent after one month. There was no perforation or infection in any of the patients. Only 500 individuals out of 2000 were accepted for the procedure. There were several causes behind this. Patients are frequently separated from their partners and hence unable to make decisions. The risk of perforation, infection and misbeliefs has trumped the method's acceptance. Similar results were observed in VD mule *et al* study [10], only 400 individuals out of 1800 were accepted for the procedure (30 percent). 14 patients requested PPIUCD removal. The major cause for removing the PPIUCD was excessive bleeding that was causing discomfort. In Nandkishor B *et al*. [14] studies, The majority of patients in this study were between the ages of 21 and 26 (58.7%), with the least percentage being above 30 years old (3.3 percent). The majority of patients in this study were primigravida (44%) and the lowest number belonged to gravida 6 (6%). (0.3 percent). IUCD insertion was done intra cesarean in 73% of cases, 22.3 percent post placental in 22.3 percent of cases, and 4.7 percent within 48 hours of birth in 4.7 percent of cases. The authors discovered that 4% of patients experienced vaginal discharge, 5% had missing IUCD threads, and 2% of patients had IUCD expulsion in this study. In this study, it was discovered that 98 percent of patients continued to utilize IUCD, while only 2% stopped. In Projestine S. Muganyizi *et al*. [15] study, in the program-affiliated clinics, there were 40 470 births, 2347 (5.8%) PPIUD insertions, and 1013 (43.2%) women who had a PPIUD who returned for a follow-up visit. Midwives were involved in 596 (58.8%) of the follow-up cases, whereas doctors were involved in 417 (41.2%). All midwives' PPIUD insertions were transvaginal, and 43 (7.2%) of them reported PPIUD-related problems at the end of the sixth week. 16 (2.7%) occurrences of uterine infection, 14 (2.3%) IUD expulsions, 26 (4.4%) IUD removals, and 33 (5.5%) cases of overall method discontinuation were among the problems. Only one case had a severe enough uterine infection to necessitate hospitalization.

Conclusion

The PPIUCD is a very effective contraception method that is underutilized. This study concluded that it takes motivation from the start of pregnancy and counseling for the entire family, not just the patient. There is a need for numerous seminars to be held even at the peripheral to improve patient access and acceptability.

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