European Journal of Molecular & Clinical Medicine

ISSN 2515-8260 Volume 10, Issue 1, Winter 2023

ORIGINAL RESEARCH

Evaluation Of Post-Partum IUCD (PPIUCD) Versus Interval IUCD (380A) Insertion

[1]Dr. Parul Sharma, [2]Dr. Kamakshi Mam, [3]Dr. Mehak Khazanchi, [4]Dr. Vanshika Gupta, [5]Dr. Saagar Anand, [6]Dr. Amita Gupta, [7]Dr. Gokul Sharma

[1,2,3,4,5,7]Resident, [6]Professor & HOD, Department of Obstetrics and Gynaecology, GMC, Jammu, Jammu and Kashmir, India

Corresponding author
Dr. Vanshika Gupta
Resident, Department of Obstetrics and Gynaecology, GMC, Jammu, Jammu and Kashmir, India

Received: 20 November, 2022 Accepted: 27 December, 2022

ABSTRACT

Background: This study compares PPIUCD and interval IUCD, two forms of contraception that can be used throughout the postpartum period to provide long-term and effective contraception.

Methods: The 300 study participants were split into two groups i.e. 150 women in the postpartum group; intrapartum or within 10 minutes; caesarean section; or within 48 hours of delivery and after six weeks of birth or postmenstrual; interval group 150. The experiment employed Cu T 380A. Between 48 hours and 6 weeks after delivery, chorioaminionitis, PROM >18 hours, unresolved PPH, and puerperal sepsis were contraindications for PPIUCD. All of them were monitored for six months.

Results: The continuation rate in the interval group was 81.81% at 6 months, compared to 88.23% in the postpartum group. 15.33% of cases after PPIUCD and 19.33% of cases following interval IUCD experienced complications. When compared to interval insertions, the expulsion rate in PPIUCD was significantly greater (6.96% v/s 2.2%; p value < 0.05). In both groups, the removal rate of IUCD was practically identical (4% in PPIUCD v/s 6.0% in interval).

Conclusions: PPIUCD, regardless of the route of delivery, is a postpartum contraceptive strategy that is efficient, safe, practical, affordable, and long-lasting.

Keywords: Cu T, Interval IUCD, PPIUCD

INTRODUCTION

Out of all, 21% of all pregnancies in the country are unplanned. [1] In India, just 26% of women who are in the first year after giving birth use any kind of contraception, leaving 65% of women with unmet family planning needs. Because pregnant and postpartum women are typically extremely motivated to control their fertility, whether by spacing out their children or completely ceasing their fertility, contraceptive counselling has thus become an essential component of prenatal and postpartum programmes. One of the most delicate times in a woman's life is the postpartum period, when both the mother and the new born require particular care and she interacts with crisis-oriented medical facilities. Options for postpartum contraception are scarce. Both barrier contraceptives and progesterone-only pills have high failure rates since they are user- and compliance-dependent techniques. Cu T insertion was

previously restricted to the interstitial time. The use of Cu T in the postpartum period, which can provide long-term and effective contraception with a failure risk of just 1%, has been recommended by recent studies on postpartum contraceptive methods.

In India, 41% of deliveries take place in medical facilities. [2] Postpartum Cu T insertion can offer a special chance to raise the prevalence of contraception among women as the number of institutional births rises. In India, the majority of women give birth to their first child before the age of 20, and they complete their family before the age of 30. However, because under-5 death rates are so high in underdeveloped nations like India, tubal ligation cannot be regarded as safe and successful at a young age of less than 30 years when their youngest child is under the age of 5. So, it can be said that immediate postpartum IUCD (PPIUCD) implantation is a reliable and secure method of contraception. Even though the most recent district level household and facility survey-3 study showed an increase in the usage of contraceptives to 54%, just 2% of married women of reproductive age in India use IUCDs. The PPIUCD service was implemented in 2010 in facilities with a high delivery rate. IUCD is typically implanted as a follow-up operation six weeks after birth or concurrently with an induced abortion.

Within 10 minutes of placental expulsion, during a caesarean section, or up to 48 hours after delivery, the PPIUCD can be implanted postplacentally. After placental delivery, IUCD insertion is safe. The safety and effectiveness of post-placental IUCD implantation are still being debated, though, because there is theoretically a larger chance of expulsion linked with uterine involution and a higher risk of infection because of lochia. Education and counselling can help people accept and keep using IUCD. The study's goal was to examine the safety, effectiveness, and side effects of inserting a PPIUCD vs an interval IUCD.

MATERIALS AND METHODS

Over the course of a year, 300 women who attended OPD and IPD in the department of obstetrics and gynaecology at a hospital in India participated in the prospective observational study (Nov, 2021- Nov, 2022). There were two groups made up of the subjects i.e. 150 postpartum women; intrapartum or within 10 minutes/within 48 hours of delivery; post placental. 150 women in the interval group were postmenstrual at six weeks after birth. The experiment employed Cu T 380A.

Between 48 hours and 6 weeks after childbirth, chorioaminionitis, protracted membrane rupture lasting longer than 18 hours, unresolved PPH, and puerperal sepsis were contraindications for PPIUCD. There were three follow-up visits: the first was at 6 weeks in the postpartum group and at 6 weeks, whichever came first, after the onset of menstruation in the interval group. The second was at 3 months, and the third was at 6 months. Women were advised to seek medical attention as soon as if they experienced any of the following symptoms: foul-smelling lochia, profuse bleeding, lower abdomen pain, any infection-related symptoms like fever, myalgia, or body aches, as well as evacuation. 32 of the 300 total women were not followed up with at 6 months. The main outcome metrics noted in the follow-up were the acceptance rate, the visibility of the strings and expulsion, as well as the occurrence and range of problems. The patient's perception of pain during IUCD insertion, their level of satisfaction with their care, and whether they would recommend IUCDs to others were the secondary outcome measures that were noted. Chi square test, percentages and test of proportion were calculated using SPSS Version 21.

RESULTS

On the basis of the type of IUCD insertion, the patients were split into two groups. Age distribution, habitat, socioeconomic status, marital status, body mass index, parity, level of education, and occupation variations between the two groups were found to be statistically

insignificant (Table 1). Neither in the postpartum patients nor in the interval cases was there a perforation discovered during the surgery. At six months of follow-up, the majority of women, 81.3% in the interval group and 86.7% in the postpartum group, were satisfied with copper T. (Table 2).

Table 1: Demographic Variables

Variable	Interval Group	Postpartum Group
AGE (years)	27.6±2.8	26.9±3.1
Literate	70.7%	80%
Housewives	52.78%	51.51%
Married	61.29%	54.54%
Urban	77.41%	78.78%

Table 2: Satisfactory status of women

Follow up	Variable	Interval Group	Postpartum Group
1	Not Satisfied	7	9
	Satisfied	122	133
	Partially Satisfied	9	2
2	Not Satisfied	6	6
	Satisfied	126	130
	Partially Satisfied	4	4
3	Not Satisfied	6	6
	Satisfied	122	130
	Partially Satisfied	4	0

When there was an issue, the women were labelled as "somewhat satisfied," but they still opted to take copper T because of its effectiveness as a contraceptive. Our study's continuation rate was 81.81% for the interval group and 88.23% for the postpartum group (Table 3). Following PPIUCD, problems happened in 15.33% of cases (23) while they happened in 19.33% of instances (29) after interval insertion. Expulsion was the most frequent consequence following PPIUCD insertion, while haemorrhage followed interval insertion. When compared to interval insertions, the expulsion rate in PPIUCD was significantly greater (6.96% v/s 2.2%; p value< 0.05). (Table 4). In the interval IUCD group, the primary reason for removal was bleeding (8 instances, 88.89%), which was much higher than in the PPIUCD group (41.2%). IUCDs were removed from the majority of women with PPIUCD (58.8%) due to societal considerations (Table 5).

Table 3: Continuation rate at 6 months

At 6 Months	Women followed Up	Total women with expulsion	women who got Cu-T removed	Women who continued	Percentage
Interval Group	132	15	9	108	81.81
Postpartum Group	136	10	6	120	88.23

Table 4: Complications After IUCD Insertion

Clinical Presentation at follow up	Interval Group	Postpartum Group
Bleeding P/V	11	4
Discharge P/V	8	4
Pain in lower abdomen	4	2
PID	0	0

Missing Thread	3	3
Expulsion	3	10

Table 5: Causes of removal of IUCD over a period of 6 months

Causes of removal	Interval Group	Postpartum Group
Bleeding P/V	8	1
Discharge P/V	0	0
Pain/PID	1	0
For Conception	0	0
Other contraceptive methods	0	0
Social factors	0	5

DISCUSSION

Women are most motivated and open to accepting family planning methods during the postpartum period. Women are also at risk for unwanted pregnancies because breastfeeding mothers have few contraception alternatives. Couples frequently underestimate the likelihood of conception since ovulation is so variable in non-nursing and partially breastfeeding women. Women who have recently given birth frequently desire a procedure that offers long-term temporary contraception without wanting permanent sterilisation. This highlights the importance of offering a contraceptive technique to new mothers right away in order to prevent unintended pregnancies and the morbidity connected with subsequent abortions. After birth, postpartum IUCD implantation offers long-lasting, reliable contraception that doesn't require ongoing management and doesn't present any significant new risks. Six weeks after giving birth, many women who want to use a contraceptive technique do not go back, which leads to an unwanted pregnancy. In order to avoid unintended pregnancy and subsequent safe or unsafe abortions, copper T can be implanted just after delivery.

The postpartum group's mean age in the current study was 27.6 ± 2.8 years, while the interval group's mean age was 27.13 ± 3.1 years; as a result, both groups are age-matched and belong to a younger age group. The majority of the women in both the postpartum (80%) and interval (73.3%) groups were between the ages of 25 and 30, suggesting that younger women are more amenable to counselling because even they are looking for an effective method of contraception after giving birth. Other studies produced similar findings. For example, the average age of the women in the post-placental copper T insertion group was 24.5 years in the study by Xu et al., 23.4 years in the study by Morrison et al., 24.7 years in the study by Celen et al., and 23.12 ± 2.42 years in the study by Singal S et al., all of which involved a young age group. [3-6]

In the current investigation, neither the interval group nor the postpartum group experienced a perforation. The thick uterine wall and the inserter's skill could be to blame for the low perforation rate in post placental implantation. According to our study, Kapp et al and Gupta G. et al did not find any perforations after post placental IUD placement, which is consistent with our study. [7,8]

In the current study, there were 122 (88.4%), 126 (92.5%), 122 (92.4%), and 133 (92.3%) women who were pleased with the use of Cu T as a contraceptive technique at the first, second, and third follow-up visits in interval delivery and postpartum delivery, respectively. This demonstrates that the women's level of satisfaction is unaffected by the method of delivery. In a research by Gupta G et al., users reported 91.7% satisfaction after six weeks, 92.9% after three months, and 95.6% after six months. [8]

Even though complications were lower in the PPIUCD group, the difference was statistically insignificant when comparing PPIUCD with interval IUCD. The cumulative rate of complications was 15.33% and 19.33% in the PPIUCD group and interval IUCD group,

respectively. This was consistent with the study of Eroglu et al., where it was found that there were no appreciable differences in the rates of complications between the two groups. [9]
Expulsion rates following PPIUCD were 6.96% in our sample, which is consistent with research by Eroglu et al. [9] In this study, the interval IUCD group's expulsion rate was 2.2%, which was considerably ($p< 0.05$) lower than the rate in the PPIUCD group. The cumulative expulsion rate after six months was 10.68% according to a study by Shukla et al. [10] In their investigation, Bonilla Rosales F et al. discovered that the expulsion rates for PPIUCD and interval IUCD were 16% and 2%, respectively. [11] The PPIUCD group experienced expulsion in 6.96% of cases (2.2% in the interval group) with complications. The most frequent consequence in the interval group, bleeding, was 7.9% (2.7% in PPIUCD group).
In the current study, there were no PID cases reported. There was no increase in the incidence of PID following immediate postpartum IUCD implantation, according to EL Beltagy et al [12]. At the 6-month follow-up, Tatum et al. observed no clinically evident pelvic infection following postplacental IUD installation. [13] However, 1.3% of women in the post placental copper T 380A insertion group and 3.8% of women in the interval group were reported to have genital infection by Eroglu et al. [9]
In the current study, 4% of PPIUCDs were removed over the course of a 6-month follow-up. Although statistically insignificant ($p=0.95$), the removal rate in the interval group was 6%. The findings of investigations conducted by Tatum et al, Thiery et al, and Celen et al are comparable to those of the current study. [5,13,14] In our study, bleeding accounted for 23.5% of PPIUCD removals and was the most common medical reason for removal.

CONCLUSION

Thus, regardless of the route of delivery, it was determined from the current study that postpartum insertion of Cu T is an efficient, secure, practical, affordable, and long-term means of postpartum contraception. Due to the rise of institutional births in India, there is a chance to provide family planning services to new mothers who want to avoid unplanned pregnancies or put off having more kids. Even if the rate of copper T expulsion is higher in the postpartum period when compared to interval insertion, it can be decreased by ensuring proper technique and timing, namely within 10 minutes of placenta expulsion.
Both groups had a reasonably low incidence of additional problems such bleeding, lower abdominal pain, and infection. Both groups showed a reduced removal rate for bleeding and/or pain. In the entire research, there was not a single instance of perforation and pregnancy. The PPIUCD group had a greater incidence of missing threads, which was likely caused by the coiling of long copper T threads inside the uterus. In the PPIUCD group, the six-month continuation rate was quite high. Since there is a higher chance of expulsion, its effectiveness is called into doubt. But the advantages exceed the drawbacks. Therefore, regardless of the form of birth, this procedure needs to be made widely known throughout the nation as an alternative for all women having institutional deliveries in tertiary health centres.

REFERENCES

1. Santhya KG. Changing Family Planning Scenario in India. Regional Health Forum WHO South-East Asia Region http://www.searo.who.int/en/Section1243/ Section 1310 / Section 1343 / Section1344/Section1836/Section1838.html , 2004.;8(1).
2. India. National Family Health Survey-3. 2005-06 Available from: Government of India, Ministry of Health and family welfare Web site: www.nfhsindia.org/factsheet.html. cited 2022 November 3.
3. Xu JX, Rivera R, Dunson TR, Zhuang LQ, Yang XL and Ma GT. A comparative study of two techniques used in immediate post placental insertion (IPPI) of the Copper T 380A IUD in Shanghai, People‘s Republic of China. Contraception 1996;54(1):33-8.

4. Morrison C, Waszak C, Katz K, Diabate F, Mate EM. Clinical outcomes of two early postpartum IUD insertion programs in Africa. Contraception. 1996;53(1):17-21.
5. Celen S, Moroy P, Sucak A, Aktulay A, Danisman N. Clinical outcomes of early post placental insertion of intrauterine contraceptive devices. Contraception. 2004;69:279-82.
6. Singal S, Bharti R, Dewan R, Divya, Dabral A, Batra A, Sharma M, Mittal P: Clinical Outcome of Postplacental Copper T 380A Insertion in Women Delivering by Caesarean: J Clin Diagn Res. 2014;8(9):OC01-4.
7. Kapp N, Curtis KM. Intrauterine device insertion during the postpartum period: a systematic review. Contraception. 2009;80(4):327–36.
8. Gupta G, Goyal R, Kadam VK, Sharma P1. The Clinical Outcome of Post Placental Copper-T-380A Insertion with Long Placental Forceps (Kelly's Forceps) After Normal Vaginal Delivery and Caesarean Section: J Obstet Gynaecol India. 2015;65(6):386-8.
9. Eroglu K, Akkuzu G, Vural G, Dilbaz B, Akin A, Taskin L, et al. Comparison of efficacy and complications of IUD insertion in immediate postplacental/early postpartum period with interval period: 1 year follow-up. Contraception. 2006;74:376-81.
10. Shukla M, Qureshi S, Chandravati: Post placental intrauterine device insertion-a five year experience at a tertiary care centre in north India. Indian J Med Res. 2012;136:432-5.
11. Bonilla Rosales F, Aguilar Zamudio ME, Cazares Montero ML, Hernandez Ortiz ME, Luna Ruiz MA. Factors for expulsion of intrauterine device TCu380A applied immediately postpartum and after a delayed period. Rev Méd Inst Mex Seguro Soc. 2005;43:5-10.
12. El Beltagy NS, Darwish EA, Kasem MS, Hefila NM. Comparison between cupper T380 Iud and multi load 375 Iud in early post-partum insertion. Middle East Fertility Society J. 2010;16:143-8.
13. Tatum HJ, Beltran RS, Ramos R, Van KH, Sivin I, Schmidt FH. Immediate post placental insertion of GYNE-T 380 and GYNE-T 380 Postpartum intrauterine contraceptive devices: Randomized study. Am J Obstet and Gynecol. 1996;175(5):1231- 5.
14. Thiery M, Van DPH, Delbeke L, Van KH. Comparative performance of two copper-wired IUDs (ML Cu 250 and T Cu 200). Immediate postpartum and interval insertion. Contracept Deliv Sys. 1980;1(1):27-35.