

A Study Of Complication Of IUCD Insertion In Postpartum Period With Interval Period

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ABSTRACT

Background: Postpartum period is one of the sensitive time of woman's life when she is in contact with health care facility and when both mother and newborn need a special care. For the purpose of preventing unwanted pregnancies and maximizing the time between pregnancies, effective contraception should be discussed and offered at that time. The risk of problems may rise if an intrauterine device (IUD) is implanted during the postpartum period at different times or by various methods.

Aim and Objective: The present study was aimed to examine complication of IUCD insertion in postpartum period with Interval period.

Methodology: This prospective observational study was conducted within a time period of two years from September 2015 to August 2017 at Department of Obstetrics and Gynaecology, Santosh Medical College and Hospital, Ghaziabad. Total 265 IUCD insertions were done. Out of this, 125 cases were of postpartum (post placental and intra caesarean) and 140 were interval insertions.

Result: Majority of the cases who accepted PPIUCD belonged to the age group upto 25 years (56.7%) and those in Interval belonged to 26-30 years (41.6%). Majority of the patients in study belonged to lower middle class : PPIUCD (66.7%) and Interval (48.8%), according to the modified Kuppusswami classification. In both the groups, IUCD insertions was done more

in multiparous women. . There were 11 expulsions in PPIUCD group (9.2%) and 3 in Interval group (2.4%) .

Conclusion: The study concluded PPIUCD method should be popularized across the country as an option to all women undergoing institutional deliveries, in tertiary health centres irrespective of the mode of delivery.

Keywords: IUCD, Postpartum, Multiparous, Obstetrics and Gynaecology.

INTRODUCTION

Intrauterine contraceptive device (IUCD) is a very effective (99%) and inexpensive family planning method which is reversible, requires little effort on the part of the user once inserted, and offers 5–10 years of protection against pregnancy. Wider use of IUCD has the potential to reduce the overall number of unintended pregnancies more than any other method.

Globally, about one of the five women in reproductive age group use IUCD¹. In India only 2% of married women of reproductive age use IUCDs, though the last district level household and facility survey-3 (2007-2008) has shown an increase in the contraceptive use (54%) [1].

In India, 65 per cent of women in the first year post-partum have an unmet need for family planning, out of which only 26% of woman are using any method of contraception [2]. Hence, contraceptive counselling has become an integral part of antenatal and postpartum programme as pregnant and postpartum women are generally highly motivated towards controlling the fertility, either in spacing out their children or stopping their fertility altogether.

Traditionally, Cu T insertion was limited to interval period. But now, recent studies on postpartum contraceptive methods have suggested the use of Cu T in postpartum period which can provide long term and effective contraception with failure rate of <1% [3] .

In the last decade, more and more women have chosen to give birth in health institutions. This preference has emerged due to the government's flagship program — Janani Suraksha Yojana, a conditional cash transfer scheme for promoting institutional deliveries. It is a part of government's efforts to reduce maternal and neonatal mortality under the National Health Mission [4].

PPIUCD is a secure and reliable method of contraception, according to a 2010 Cochrane review [5]. A new knowledge of this postpartum contraception calls for a fresh look at the benefits and drawbacks of PPIUCD. The goal of the current study is to evaluate the safety and efficacy of immediate postpartum IUD insertion to interval insertion in women who deliver vaginally or by caesarean section.

MATERIALS AND METHODS

Present study was conducted in the Department of Obstetrics and Gynaecology, Santosh Medical College and Hospital, Ghaziabad. It was a prospective observational study conducted within a time period of two years from September 2015 to August 2017.

Total of 265 women of reproductive age group were enrolled for the study after counselling. The study population was divided into three groups:

- Group 1(Study Group)- Postpartum insertion (following normal vaginal delivery and intra-caesarean) - 125 cases
- Group 2(Control Group)- Interval insertion - 140 cases

In study group, Cu 375 was inserted within 10 minutes of expulsion of placenta in normal vaginal delivery, using Kelly's placental forceps, taking all aseptic precautions as per the guidelines of USAID, Ministry of health and family welfare, government of India 2010 [2]. Intra caesarean Cu 375 was placed at fundus manually and IUD thread was left in lower uterine segment without trimming the thread. All postpartum women were observed for 6 hours after delivery and re- examined before discharge from the hospital.

In control group, Cu 375 was inserted between 4th to 7th days of menstrual cycle by standard 'no touch' withdrawal technique, under all aseptic precautions.

Women were explained about follow up at 6 weeks, 3 months and 6 months or earlier in PPIUCD group if she noticed any warning signs such as foul smelling lochia, excessive bleeding, lower abdominal pain, fever and in case of expulsion. Women were called after next menses, at 3 months and 6 months in the control group for follow-up.

The observations are described in terms of percentages. Both groups were compared with respect to clinical outcomes. Student T test was used to detect differences in prevalence rate of clinical outcomes, and $P < 0.05$ was considered statistically significant. Data were analyzed using SPSS statistical software.

RESULTS

Total 265 IUCD insertions were done. Out of them, 125 cases were of postpartum (postplacental and intra caesarean) and 140 were interval insertions. Five women of PPIUCD group and 15 of Interval group were lost to follow up. Further analysis was done on 245 cases who completed the study.

Table1: Socio-demographic data distribution of IUCD.

Socio-demographic data distribution		Number (Percentage)	
		PPIUCD(n=120)	INTERVAL (n=125)
Age	Upto25	68 (56.7%)	35 (28%)

(In Years)	26-30	40 (33.3%)	52 (41.6%)
	31-35	11 (9.2%)	26 (20.8%)
	36-40	1 (0.8%)	9 (7.2%)
	41&above	0 (0%)	3 (2.4%)
Socio-Economic Status of Women	Lower	4 (3.3%)	7 (5.6%)
	Upper Lower	31 (25.8%)	6 (4.8%)
	Lower Middle	80 (66.7%)	61 (48.8%)
	Upper Middle	5 (4.2%)	9 (7.2%)
Parity	P1	43 (35.8%)	30 (24%)
	P2-P4	77 (64.2%)	73 (58.4%)
	>P4	0 (0%)	22 (17.6%)

As shown in Table 1, Majority of the cases who accepted PPIUCD belonged to the age group upto 25 years (56.7%) and those in Interval belonged to 26-30 years (41.6%). Majority of the patients in study belonged to lower middle class: PPIUCD (66.7%) and Interval (48.8%), according to the modified Kuppuswami classification. In both the groups, IUCD insertions were done more in multiparous women. About 64.2% women in PPIUCD group and 58.4% in Interval group were multiparous.

Table2: Follow ups and type of follow up after IUCD insertion.

		Number (Percentage)	
		PPIUCD(n=120)	INTERVAL(n=125)
Follow Up	Up to6 Weeks	50 (41.6%)	41 (32.8%)
	6Weeks Or after	21 (17.5%)	12 (9.6%)
	3Months	12 (10%)	22 (17.6%)
	6Months Or More	45 (37.5%)	55 (44%)
Type Of Follow Up	Clinic Visit	91 (75.8%)	89 (71.2%)
	Telephonic	29 (24.2%)	36 (28.8%)

According to Table 2, Out of 265 women recruited, 245 women came for follow up. In PPIUCD group, most of the women came for follow up upto six weeks (41.6%). Women from Interval group mostly came for follow up at and beyond six months (44%). Most women came to OPD clinics for follow up in both the study groups (PPIUCD-75.8% and Interval-71.2%).

Table 3: Findings at follow up.

Findings At Follow Up	Number (Percentage)		pvalue
	PPIUCD(n=120)	INTERVAL(n=125)	
Expulsion	11 (9.2%)	3 (2.4%)	0.02
Infection	12 (10%)	19 (15.2%)	0.22
Missing Strings	14 (11.6%)	4 (3.2%)	0.01
HMB	6 (5%)	10 (8%)	0.34
Pain	5 (4.1%)	4 (3.2%)	0.68
No Complains	64 (53.3%)	68 (54.4%)	0.86
Long Thread	7 (5.8%)	0 (0%)	-
Failure	0 (0%)	1 (0.8%)	-

As shown in Table 3, About 53.3% women in PPIUCD group and 54.4% women in Interval group had no complaints. Most common complaint observed in PPIUCD group was missing string (11.6%). Only 3.2% women in Interval group had missing string. The results were statistically significant ($p < 0.01$).

Most common complaint observed in Interval group was heavy menstrual bleeding (16%). Whereas 10% women in PPIUCD group had similar complaint. The results were statistically insignificant ($p = 0.34$). Eleven expulsions were reported in PPIUCD group (9.2%) and 3 in Interval group (2.4%). The expulsion rate in PPIUCD group is significantly high ($p < 0.02$).

Infection rate was 10% in PPIUCD group and 15.2% in Interval group. The results were statistically insignificant ($p = 0.22$). Pain was reported in 4.1% of cases in PPIUCD group and 3.2% of cases in Interval group. The results were statistically insignificant ($p > 0.68$). Complaint of long thread was found in PPIUCD group (7 cases) which was cut at clinic visits for follow-up. No such complaint was found in Interval group. Only single case of failure in the form of pregnancy occurred in the Interval group. No case of perforation was reported from both the groups.

DISCUSSION

In our study, total 265 IUCD insertions were done. Out of this, 125 cases were of postpartum (postplacental and intracaesarean) and 140 were interval insertions. Five women of PPIUCD group (4%) and 15 of Interval group (10.7%) were lost to follow up. Further analysis was done on 245 cases who completed the study (follow-up rate of 92.4%). Kumar et al., in their multicentric study in India of 2,733 women, reported a follow-up rate of 63.3%⁵¹ which was low as compared to our study.

In present study most of the women in Interval group belonged to 26-30 years (41.6%), mean age 28.7 ± 4.91 years. Overall mean age of women in this study was 27.2 ± 4.54 years. Majority of the cases who accepted PPIUCD belonged to the age group up to 25 years (56.7%), mean age 25.7 ± 3.51 years in the present study. In study by Sharma et al., [6] and Sonali et al., [7] highest acceptance of PPIUCD was seen in age group 21-30 years (82.96% & 64.6% respectively).

Other studies also showed similar results like the mean age of women in postplacental copper T insertion group was 24.5 years in the study done by Xu et al., [8] 24.7 years in the study conducted by Celen et al., [9] and 23.12 ± 2.42 years in the study by Singal S et al., [10]. All of them belonged to young age group. It also suggests that women of younger age group are more easily counselled as they are looking for an effective method of contraception after childbirth.

Majority of the patients in the present study belonged to lower middle class: PPIUCD (66.7%) and Interval (48.8%), according to the modified Kuppuswami classification. Results were similar to study by Sharma et al., [6] and Sonali et al., [7] where acceptance of PPIUCD was 55.67% and 52% respectively.

Most women who came for follow up, came up to six weeks in PPIUCD group (41.6%). Women from Interval group got followed up at and beyond six months (44%). Out of 265 women recruited, 245 women only came for follow up. Most women came to OPD clinics for follow up in both the study groups (PPIUCD-75.8% and Interval-71.2%). Rest of the women were followed up by telephonic interview.

About 53.3% women in PPIUCD group and 54.4% women in Interval group had no complains in the present study. In study by Sonali et al., [7] 62.17% women had uneventful course after PPIUCD insertion. In PPIUCD group, pain was present in 4.1% women. Only 3.2% women in Interval group had pain.

Infection rate was 10% in PPIUCD group and 15.2% in Interval group. Though the complaint was higher in Interval group, the results were not statistically significant ($p=0.22$). EL Beltagy et al., [11] also reported no increase in the incidence of PID after immediate postpartum IUCD insertion. Tatum et al., [12] reported no clinically apparent pelvic infection after postplacental IUD insertion at 6 months follow up. In the present study, 11 expulsions were reported in PPIUCD group (9.2%) and 3 in Interval group (2.4%). This could be due to improper technique of PPIUCD insertion. In study by Ricalde et al., [13] the expulsion rates were 10.4% for the MLCu 375 and 7.7% for the Cu T 380A and they were not influenced by the moment of the intrauterine device insertion.

In the present study, 14 cases of PPIUCD group (11.6%) and 4 cases of Interval group (3.2%) were reported with missing strings. In study by Janki Patel, [14] IUCD strings were visible in 73% women at 6 week and in 74.8% women at 6 months. Complaint of long thread was found in PPIUCD group (7 cases) which was cut at clinic visits for follow-up by the patients.

75% women in PPIUCD group and 80% in Interval group were satisfied with IUCD. This emphasizes that mode of insertion is not affecting the satisfaction level of women. According to study by Gupta et al.,[15] satisfaction rates were 90% (PPIUCD group) & 92% (Interval group). In study by Mohan H et al.,[16] rates were 88% and 84% for PPIUCD group and Interval group respectively. About 20 cases in PPIUCD group (16.6%) and 16 cases in Interval group got IUCD (12.8%) removed. Most common cause of removal of IUCD among women using PPIUCD was bleeding (35%) and among those using Interval IUCD was desiring conception (31.25%). According to study by Soni M et al.,[17] and Mohan H et al.,[16] bleeding and pain were most common causes of removal of PPIUCD.

CONCLUSION

Thus it was concluded from the present study that insertion of Cu 375 immediately following delivery i.e. postplacental is an effective, safe, convenient, low cost and long term method of postpartum contraception irrespective of the mode of delivery.

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