



MOTIVATION OF POSTPARTUM IUCD IS CHALLENGING AT GRASSROOT LEVEL- AN OBSERVATION

Dr. Sabyasachi Ray	MBBS, MD, FICOG, PhD — Professor, Department of Obstetrics and Gynecology, Midnapore Medical College, Paschim Midnapore, West Bengal, India
Dr. Akanksha Chaturvedi*	MBBS, MS, DNB – Senior Resident, Department of Obstetrics and Gynecology, Midnapore Medical College, Paschim Midnapore, West*Corresponding Author
Dr Jiabul Mondal	MBBS – Post Graduate Trainee at Department of Obstetrics and Gynecology, Midnapore Medical College, Paschim Midnapore, West
Dr. Manepalli Siva Tejaswi	MBBS, MS - Senior Resident, Department of Obstetrics and Gynecology, Midnapore Medical College, Paschim Midnapore, West

ABSTRACT **Purpose:** - The objective was to study the reason of refusal of Post-Partum Intra-Uterine Contraceptive Device (PPIUCD) at grassroots level by Indian women. **Methods:** - A prospective observational study was conducted at the Department of Obstetrics and Gynecology, Midnapore Medical College and Hospital. **Results:** 500 pregnant women were included in the study. The majority (62%) of women was in 21 to 25 years age group, housewife (98%), primipara (49.8%) or multipara (50.2%), belonged to lower socio-economic status (84.4%) and had no primary level of education (43.6%). There were 23 (4.6%) women who had not done 1st antenatal check-up in their first trimester and out of total 337 (67.4%) delivered vaginally. The acceptance of PPIUCD was 11.2% and rest 88.8% (444/500) refused it and various reasons behind refusal were disagreement by husband (22.9%) and mother-in-law (19.8%) and fear and myths associated with the practice (25.9%). **Conclusion:-** Educating the couple regarding the need for contraception is essential and can be done by impressing the attendance of the spouse or family member at the antenatal clinics.

KEYWORDS : PPIUCD, Contraception, Family Planning counseling, Cu-T

INTRODUCTION

According to NFHS 2015-2016, unmet need for family planning among (15–45 years) married women in India is 12.9% with unmet need for spacing is 5.6 %. An unplanned pregnancy can lead to maternal and child morbidity and mortality. Eighty six percent unintended pregnancies resulted from non-use of contraception and almost 50% ended in induced abortions.^[1] The incidence of unintended pregnancy in India in 2015, was estimated that 70·10 pregnancies per 1000 women occurred among age group of 15–49 years. Abortions accounted for one third of all the pregnancies, and nearly half of pregnancies were unintended.^[2] The unintended pregnancy is a strong indicator of the need for contraceptive services.

World Health Organization (WHO) recommends insertion of an Intrauterine Contraceptive Device (IUCD) immediately after delivery, as one of the safe and effective temporary contraception and spacing method. The Post-Partum Intra-Uterine Contraceptive Devices (PPIUCDs) are IUDs that are inserted immediately following the delivery of the placenta or up to 48 hours after birth.^[3]

The PPIUCD family planning service is available in India since 2008, was launched to reduce unwanted pregnancies in the postpartum period. Currently, offered by Government of India under the National Family Planning Programme^[4].

1. IUCD 380 A, effective up to 10 years
2. IUCD 375, effective up to 5 years

Government of India also has PPIUCD incentive scheme, under which Rs. 300 to the acceptor and Rs. 150 to the provider is granted.^[5]

AIMS AND OBJECTIVE –

1. To observe the reason of refusal and non-acceptance of postpartum intrauterine contraceptive device (PPIUCD) at grassroot level by Indian women.
2. To study the misconception associated with the usage of PPIUCD.

METHODS – This prospective observational study was conducted from April, 2021 to September 2022 at the Department of Gynecology and Obstetrics.

INCLUSION AND EXCLUSION CRITERIA:

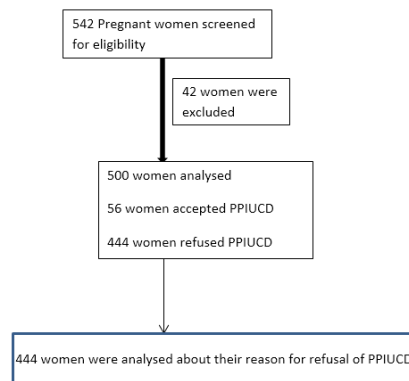
Women who delivered at our institute, vaginally or by cesarean section and they were within their first 48 hours of postpartum period and gave their consent were included. Women were excluded from the study if

they had (i) hemoglobin <7gm/dl, (ii) fever during labor and delivery, (iii) Post-Partum Hemorrhage (PPH), (iv) Manual removal of placenta, (v) Prelabor rupture of membranes (> 18 hours), (vi) Obstructed labor, (vii) Fibroids or uterine malformations, (viii) Allergy to metals and metallic alloys, (ix) Active genital tract infection, (x) Stillbirth/IUFD/baby admitted to NICU.

STUDY TECHNIQUE: On fulfilling inclusion criteria women were enrolled and detailed history regarding age, education, occupation, socio-economic status, husband's education and occupation, their parity, number and place of antenatal check-ups, mode of delivery, previous usage of contraceptive and knowledge about PPIUCD was noted. They were offered PPIUCD, if women denied it, then their reason for refusal were enquired and noted.

SAMPLE SIZE- The acceptance level of PPIUCD was 17% in previous study done by Gonie et al,^[6] and using the formula, $n = P \times (100 - P) \times z^2 / d^2$. The sample size was taken as 500.

Figure 1- Flowchart depicting study subject flow



RESULTS – Of 542 pregnant women screened for eligibility, 500 were included in the study. The majority (62%) of women was in 21 to 25 years age group, housewife (98%), primipara (49.8%) or multipara (50.2%), belonged to lower socio-economic status (84.4%) and had no primary level of education (43.6%). There were 23 (4.6%) women who had not done 1st antenatal check-up in their first trimester and out of

total 337 (67.4%) delivered vaginally. The acceptance of PPIUCD was 11.2% and rest 88.8% (444/500) refused it. All 56 patients who accepted PPIUCD had attended four or more antenatal visits and were counseled in their antenatal period.

In the study, multiparaous (having one living child) women were more inclined towards the acceptance of PPIUCD than primiparaous. In this study 89.2% (446/500) of the participants knew about PPIUCD. The antenatal check-up done in current pregnancy was most common source of information about PPIUCD to the women 29.4% (147/500) followed by pre-existing knowledge from Health care worker 24.8% (124/500).

In this study, 64 women (12.8%) considered that PPIUCD has good compliance, 112 (22.4%) perceived it as long acting and 164 (32.8%) reversibility as an advantage.

The various reasons behind refusal were 18 (3.6%) patients wanted to conceive again, 36 (7.2%) patients mentioned discomfort during sexual intercourse, disagreement by husband (22.9%) and mother-in-law (19.8%) and fear and myths associated with the practice (25.9%). Some women 5.8% wanted to opt for other contraceptive method. Few refused PPIUCD 13.2% due to religious beliefs.

Among 115 participants the different fear and myths associated with PPIUCD were, 6.0% patients mentioned fear of birth defects in future pregnancy, 17.3% patients had fear o

was from rural area and 55/56 (98.2%) patients were from urban area. The association of residence with acceptance of PPIUCD was statistically significant ($p=0.0001$), this was similar to recent study done by Gupta S et al.^[9] Majority of women who accepted PPIUCD has completed education till primary (83.9%) and secondary level of education (14.3%).

Among the acceptors, maximum {45 (80.4%)} patients had parity P2+0. The acceptance was more among the multipara as compared to primipara women. This was similar to a study done by Nayek AK and Jain MK, which shows the acceptance was maximum among para-2 (42.84%).^[10]

In this study, 357 of total 500 participants had four or more antenatal check-up in current pregnancy, and among the acceptors of PPIUCD (56/500) all had four or more antenatal check-up. So, the association of total antenatal check-up with acceptance of PPIUCD was statistically significant ($p<0.0001$), this finding was similar to the study by Gonic et al.^[6]

The participant who accepted PPIUCD, 56 had vaginal delivery. The association of mode of delivery with acceptance of PPIUCD was statistically significant ($p=0.0001$). This observation was similar to a study done by Kanakuze CA et al.,^[11] the women who had normal delivery were three times more likely use of PPIUCD (AOR = 3.623; 95% CI 2.017–6.507) compared to cesarean delivery.

Women who accepted PPIUCD, 56 (100.0%) patients have used contraceptive methods in past ($p<0.0001$). This was parallel to recent study, by Bhattacharya P et al.,^[12] where the acceptance was higher in women with past history of contraceptive use (45.6%) compared to women with no such history (25%).

From the total 500 members, 56 patients who accepted PPIUCD had prior information about it ($p=0.0057$). As shown by Gonic et al.,^[6] the majority of study participants (76.4%) have heard about IUCD as a contraceptive method and 63.2% of them responded that they have heard that IUCD can be inserted immediately after delivery.

All 56 acceptors were counseled regarding it during their antenatal period ($p<0.0001$). The results were similar to the acceptance when counseling was provided in the ante-natal period in a study by Gupta S et al.,^[9] and also counseled the women about the benefits of PPIUCD during their intrapartum period, which essentially convinced them to choose PPIUCD as a family planning method.

In our study, out of total 500 study participants 11.2% (56/500) accepted PPIUCD as a method of contraception after the delivery of placenta which was comparable to the overall acceptance of immediate PPIUCD usage, 12.4% as seen in study conducted by Gonic et al.,^[6] in 2017. Among 56 patients who accepted PPIUCD in this study, 52 patients had in mentioned antenatal check-up as their source of information (pertains to first source of information only) regarding PPIUCD and 4 patients had FP UNIT.

In the present study, reason for refusal of PPIUCD as a method of contraception were derived as, 18 (4.0%) patients wanted to conceive again, 36 (8.1%) patients mentioned discomfort during sexual intercourse as their reason, 115 (25.9%) patients had various fear and myth associated with the use of PPIUCD. Among the participant, 102 (22.9%) and 88 (19.8%) patients did not have husband and mother-in-law approval for this method respectively. Among the women 5.8% wanted to opt for other contraceptive method. Other 13.2% refused PPIUCD due to religious beliefs.

Various persisting fears and myths were further enquired, among participants, 7 (6.0%) patients mentioned fear of birth defects in future pregnancy, 20 (17.3%) had fear of infection, 7 (6.0%) had myth that PPIUCD causes infertility and 9 (7.82%) mentioned that PPIUCD causes cancer. Among the patient who refused, 31 (26.9%) patients mentioned heavy menstrual bleeding, 12 (10.4%) obesity, 26 (22.6%) pain and foreign body sensation as their fear and 3 (26.0%) patients mentioned that PPIUCD can cause perforation of uterus and migrate into abdomen. In a study by Gupta S and Bansal R.^[13] similar reasons were stated by the women who declined ($n=120$) PPIUCD cited refusal by their husbands (23.33%), concern about the partial/incomplete knowledge (18.3%), preference to 119 other methods (17.5%), non-willingness for adopting any contraception immediately (15.8%),

Table 1 Social, demographical and clinical characteristics

VARIABLES	ACCEPTED (n=56)	REFUSED (n=444)	TOTAL (500)	P-value
AGE GROUPS				
< 20 years	7	144	151	0.9537 (Not significant)
21-25 years	30	280	310	
25- 30 years	19	20	39	
RESIDENCE				
Rural	1	443	444	0.0001 (Significant)
Urban	55	1	56	
RELIGION				
Hindu	45	334	379	0.3981 (Not significant)
Muslim	11	110	121	
SOCIO-ECONOMIC STATUS				
Lower	46	376	422	0.6463 (Not significant)
Lower Middle	9	65	74	
Middle	1	3	4	
EDUCATIONAL STATUS				
Below Primary	1	259	260	0.0001 (Significant)
Primary	47	184	231	
Secondary	8	0	8	
Graduate	0	1	1	

infection, 6.0% had myth of infertility and 7.82% patients had malignancy as their fear. Among the patient who refused, 26.9% patients mentioned heavy menstrual bleeding, 10.4% obesity, 22.6% pain and foreign body sensation as their concern and 26.0% patients mentioned that PPIUCD can cause perforation of uterus and migrate into abdomen.

DISCUSSION

The majority of the women was in 21 to 25 years age group, (mean age of the study group is 21.5620 ± 2.0964 years with the minimum age recorded was 17 years and maximum age recorded was 29 years) housewife (98%), primipara (49.8%) or multipara (50.2%), belonged to lower socio-economic status (84.4%) and had no primary level of education (43.6%). Among 500 participants, 444 (88.8%) patients were from rural area and rest 56 (11.2%) patients were from urban area. Our findings on socio-demographic pattern of women were consistent with the findings of previously published systemic review done by Nigam A et al.^[7]

Among the patient who accepted PPIUCD, 45 (80.4%) patients were Hindu and 11 (19.6%) patients were Muslim. The association of religion with acceptance of PPIUCD was not statistically significant ($p=0.3981$), this is concurrence to a recent study done by Xess S et al., in Rajasthan.^[8] Among who accepted PPIUCD, 1/56 (1.8%) patient

religious beliefs (15%) and due to fear of pain and heavy bleeding after insertion (10%).

CONCLUSION

Majority of the women are either not timely counseled or not judiciously counseled during their antenatal visits. The refusal of husband and family members for PPIUCD usage adds to the burden of denying contraception. Educating the couple regarding the need for contraception is essential and can be done by impressing the attendance of the spouse or family member at the antenatal clinics. The educational status of the women and her partner plays a key role in the acceptance and usage of PPIUCD. It will help them to maintain spacing between pregnancies and prevent unintended pregnancies and induced abortion and the complications related to it. This will also aid to overcome the misconceptions and taboos associated with the usage of PPIUCD. There is a necessity to re-channel the available resources and use it in a manner that changes are noticed concerning the behavioral modifications towards IUCD. The emphasis should be on proper counseling since antenatal period which will help the women to overcome the fear and myths associated with its usage. Integration of PPIUCD counseling service at every delivery setup from beginning of antenatal period with provision of couple counseling and door-to-door awareness will further improve the success rate. PPIUCD is a long acting reversible contraceptive, and has a promising future as preferred contraceptive method.

Table 2- Obstetrics parameter

VARIABLES	ACCEPTED (n=56)	REFUSED (n=444)	TOTAL (500)	P-value
NUMBER OF ANC VISIT				
Less than 4	0	143	143	<0.0001 (significant)
4 or more	56	301	357	
PARITY				
Primipara	2	247	249	0.0001 (Significant)
Multipara	54	197	251	
MODE OF DELIVERY				
Vaginal	56	281	337	<0.0001 (Significant)
C- Section	0	163	163	

Table 3 – Knowledge about contraception and PPIUCD

VARIABLES	ACCEPTED	REFUSED	TOTAL (500)	P-value
PAST USAGE OF CONTRACEPTIVE (ANY)				
No	0	281	337	<0.0001 (Significant)
Yes	56	163	163	
PREVIOUS KNOWLEDGE ABOUT PPIUCD (AT THE BEGINNING OF STUDY)				
No	0	139	139	<0.0001 (Significant)
Yes	56	305	361	
COUNSELING DONE IN				
Antenatal	56	359	415	0.0016 (Significant)
During Labour	0	66	66	
Postpartum	0	19	19	

Table 4 – Reason for refusal of PPIUCD

Reason For Refusal of PPIUCD	Frequency	Percentage
Desire Pregnancy in future	18	4.0%
Discomfort during Intercourse	36	8.1%
Fears and myths	115	25.9%
Husband Refusal	102	22.9%
Mother In Law Refusal	88	19.8%
Opted for Other Methods	26	5.8%
Religious Beliefs	59	13.2%
Total women who refused PPIUCD insertion	444	100.0%

Table 5- Various fears and myths associated with PPIUCD usage

Fear and Myths Associated (among 115 women)	Frequency	Percentage
Birth Defects in next child	7	6.0%
Infection	21	17.3%
Infertility	7	6.0%
Malignancy	9	7.82%
Heavy menstrual bleeding	31	26.9%
Obesity	12	10.4%
Pain and foreign body sensation	26	22.6%
Perforation and migration	3	26.0%
Total	115	100.0%

REFERENCES

- Tengli S, Deshmukh UB. Efficacy and satisfaction rate in postpartum intrauterine contraceptive device insertion: A prospective study
- Singh S, Shekhar C, Acharya R, Moore AM, Stillman M, Pradhan MR, Frost JJ, Sahoo H, Alagarajan M, Hussain R, Sundaram A. The incidence of abortion and unintended pregnancy in India, 2015. *The Lancet Global Health*. 2018 Jan 1;6(1):e111-20.
- Divakar H, Bhardwaj A, Purandare CN, Sequeira T, Sanghvi P. Critical factors influencing the acceptability of post-placental insertion of intrauterine contraceptive device: a study in six public/private institutes in India. *The Journal of Obstetrics and Gynecology of India*. 2019 Aug;69(4):344-9.
- "NHM." Reference Manual for IUCD Services, Family Planning Division, Ministry of Health and Family Welfare, Government of India, Mar. 2018, https://nhm.gov.in/New_Updates_2018/NHM_Components/RMNCHA/Family_planning/Schemes_&_Guidelines/Injectable_Contraceptive_MPA.pdf.
- Government of India, Ministry of Health and Family Welfare. Extension of the existing PPIUCD incentive scheme also covering Post Abortion IUCD (PAIUCD) [Internet]. 2017. Available from: http://nhm.gov.in/images/pdf/programmes/family-planning/schemes/PAIUCD-PPIUCD_letter.pdf
- Gonie A, Worku C, Assefa T, Bogale D, Girma A. Acceptability and factors associated with post-partum IUCD use among women who gave birth at bale zone health facilities, Southeast-Ethiopia. *Contraception and reproductive medicine*. 2018 Dec;3(1):1-8.
- Nigam A, Ahmad A, Sharma A, Saith P, Batra S. Postpartum intrauterine device refusal in Delhi: reasons analyzed. *The Journal of Obstetrics and Gynecology of India*. 2018 Jun;68(3):208-13.
- Xess S, Sharma M, Rajoria L, Mehta S. A study to evaluate and compare the expulsion, removal and continuation of post placental insertion of Cu 375 and CuT 380A in Indian women. *Int J Clin Obstet Gynaecol*. 2018;2:33-8.
- Gupta S, Bansal R, Shergill HK, Sharma P, Garg P. Correlates of Post-Partum Intra-Uterine Copper-T Devices (PPIUCD) Acceptability and Retention: An Observational Study from North India.
- Nayak AK, Jain MK. Experience on awareness, acceptability, safety, efficacy, complications and expulsion of post-partum intrauterine contraceptive device insertion. *International Journal of Scientific Study*. 2017;5(1):207-12.
- Kanakuze CA, Kaye DK, Musabirema P, Nkubito P, Mbalinda SN. Factors associated with the uptake of immediate postpartum intrauterine contraceptive devices (PPIUCD) in Rwanda: a mixed methods study. *BMC Pregnancy and Childbirth*. 2020 Dec;20(1):1-11.
- Bhattacharya P, Linyu K, Chakraborty S. Acceptability, Uptake and safety of post-partum intrauterine contraceptive device: a case study. In *Population Dynamics in Eastern India and Bangladesh 2020* (pp. 105-113). Springer, Singapore.
- Gupta S, Bansal R, Shergill HK, Sharma P, Garg P. Correlates of Post-Partum Intra-Uterine Copper-T Devices (PPIUCD) Acceptability and Retention: An Observational Study from North India. (2021)