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Original Research Article

A prospective observational study of post-partum intrauterine contraceptive device acceptance in a tertiary care centre

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ABSTRACT

Background: Provision of PPIUCD is being rapidly scaled up in India with facilities in at least 19 states offering the method in 2013. According to National Family Health Survey (NFHS)-3, the prevalence of modern method of contraceptive use is 48.5% and all methods 56% in India. PPIUCD placement remains a viable option for patients who wish to use a long-acting reversible contraceptive (LARC) method and to have it placed at the time of their delivery. Hence, we planned this study with an aim to evaluate acceptability PPIUCD at tertiary care centre.
Methods: It was an observational and prospective study of acceptance of PPIUCD as a method of contraception in patients who delivered within the study period in our institute Grant Medical Hospital and College, Mumbai. Data analysis was done with statistical software SPSS V 25.0.
Results: A total of 2014 patients were enrolled in the study. The mean age was noted to be 25.87 years. Frequency of ANC visits among the patients was 4 to 6 (39.87%). Commonest obstetric history finding was previous live birth history in 59.38% cases. Pregnancy outcome was vaginal delivery noted in 63.01% of the females. 879 (43.65%) cases accepted PPIUCD. For those who did not accept PPIUCD, commonest cause was tubal ligation in 34.19%, followed by fear of pain in 18.94%, partner's refusal in 10.31%.
Conclusions: The acceptance rate in study for PPIUCD was 43.65% which was higher than most of the published evidence. The common reasons for not accepting PPIUCD were tubal ligation.

Keywords: Postplacental intrauterine contraceptive device, Long-acting reversible contraceptive, Tubal ligation

INTRODUCTION

Provision of PPIUCD is being rapidly scaled up in India with facilities in at least 19 states offering the method in 2013.[1] According to National Family Health Survey (NFHS)-3, the prevalence of modern method of contraceptive use is 48.5% and all methods 56% in India.[2]

ACOG advises and supports the immediate post-partum long lasting reversible contraceptives (LARC) insertion (ie, intrauterine contraceptive device [IUCD] before hospital discharge) as a best practice, recognizing its role in preventing rapid repeat and unintended pregnancy. Yet, the number of young mothers volunteering the IUCD insertion is very minimum. According to a recent survey in USA, approximately 10 postpartum IUCD insertions for every 10,000 deliveries, as compared with 683 tubal sterilizations for every 10,000 deliveries was noted.[3]

PPIUCD placement remains a viable option for patients who wish to use a long-acting reversible contraceptive (LARC) method and to have it placed at the time of their

delivery. It was imperative to generate country-based evidence on post insertion outcomes after introduction of PPIUCD programme. Hence, we planned this study with an aim to evaluate acceptability, safety, efficacy and complications of PPIUCD at tertiary care centre.

The specific benefits of IUCDs include the convenience and reliability of its use, reduced risk of uterine perforation due to its thick wall, negligible risk of initial side effects (bleeding and cramping) due to presence of normal puerperal changes, no effect on breastmilk secretion and also reduced chance of heavy bleeding especially among the lactational amenorrhoea women.[9]

METHODS

A prospective, observational study. This study was conducted at Department of Obstetrics and Gynaecology, tertiary care teaching hospital. The study population were females who had delivered during the study period at the Obstetrics and Gynaecology department of the study centre, which was a tertiary care teaching hospital. All the females who had delivered during the study period were considered as eligible subjects based on the inclusion criteria. All these females were screened and if fulfilling the criteria, were included for data analysis.

Data was collected between March 2021 to March 2022. The analysis of the parameters was done after data was collected completely. At any point of time, the patient may opt out of the study. Study was initiated only after institutional ethics committee permission was obtained.

Inclusion criteria

Inclusion criteria were the all the females delivered during the study period who gave informed consent and were willing for follow up for 6 months.

Exclusion criteria

Exclusion criteria were females who were a case of Premature rupture of membrane >18 hours, severe anaemia, antepartum haemorrhage, unresolved postpartum haemorrhage, puerperal sepsis, chorioamnionitis intrauterine foetal death, HIV not on antiretroviral therapy, H/O trophoblastic diseases, known case of tuberculosis, diabetes and heart disease, H/O fever in the recent past, sexually transmitted diseases, uterine cavity distortion with fibroids and septa, medico legal cases were excluded from the present study.

Under all aseptic precaution and care, after cleaning the perineum with povidone iodine Sim's speculum was gently inserted in vagina to visualize cervix, cervix and vaginal walls were cleaned with povidone iodine soaked swabs. Anterior lip of cervix was gently catch hold with ring forceps IUCD was inserted lower uterine segment. Other hand was moved to abdomen over the fundus and uterus was pushed upward gently to reduce the angle and curvature between the uterus and vagina. IUCD with Kelly's forceps was moved upwards until it can be felt at the fundus, forceps were opened to release the IUCD and swept to side walls. Uterus was stabilized until forceps removal was complete, thread was inspected through cervix. Women allowed to take rest for some times on the labour table opened to release the IUCD and swept to side walls. Uterus was stabilized until forceps removal was complete, thread was inspected through cervix. Women allowed to take rest for some times on the labour table.

Women were advised to come to the follow-up visits. At discharge, patients were given the following instructions. First was to check for copper-T threads periodically. Second was to follow up for check up in the OPD at 6 weeks, 3 months and 6 months after copper-T insertion.

To report to the OPD SOS in case of irregular or heavy bleeding PV, excessive lower abdominal pain, fever, white discharge PV, threads not felt etc. The females who were inserted with the PPIUCD were followed up at 6 weeks and 6 months to note the complications associated with the PPIUCD. The complications were noted in the proforma.

Parameters assessed

The various variables noted down for the study included demographic details like age, educational status, parity, mode of delivery, vaginal delivery, caesarean delivery. PPIUCD consent (accepted/decline), reasons for decline PPIUCD, prefer to use another method, need to discuss with partner/family, fear of pain and heavy bleeding, partner refusal, does not want contraception immediately, not enough knowledge about PPIUCD, fear of cancer, interferes with intercourse and religious belief were assessed.

RESULTS

Demographic details of enrolled patients

A total of 2014 patients were enrolled in the study. The mean age was noted to be 25.87 years, with a range of 18 years to 55 years in study. Most common age group noted was 18-25 years (55.76%), followed by 26-30 years (28.75%) (Table 1).

Table 1: Age group distribution of enrolled cases.

Age group	Number of cases	% cases
18-25 years	1123	55.76
26-30 years	579	28.75
31-35 years	260	12.91
36-40 years	42	2.09
>40 years	10	0.50
Total	2014	100

Education status of enrolled cases

Most of the enrolled females were educated till secondary school (59.48%), followed by up to XIth or XIIth standard (21%). Complete details of educational status given below in Table 2.

Table 2: Education status of enrolled cases.

Education status	Number of cases	% cases
Illiterate	247	12.26
Up to primary school	99	4.92
Up to Secondary school	1198	59.48
Up to XIth or XIIth standard	423	21.00
Graduation or above	47	2.33

ANC visit status of enrolled cases

Commonest frequency of ANC visits was 4 to 6 (39.87%), followed by 1 to 3 (33.42%) (Table 3).

Table 3: ANC visit status of enrolled cases.

ANC visit status	Number of cases	% cases
1 to 3	673	33.42
4 to 6	803	39.87
>6	17	0.84
Unbooked	74	3.67

Obstetric history of enrolled cases

Commonest obstetric history finding was previous live birth history in 59.38% cases, followed by primigravida (37.24%). Abortion history was noted in 2.78% while 12 cases of IUD history was noted (Table 4).

Table 4: Obstetric history of enrolled cases.

Obstetric history	Number of cases	% cases
Primigravida	750	37.24
Abortion history	56	2.78
IUD History	12	0.60
Previous live birth	1196	59.38

Pregnancy outcome of enrolled cases

FTND was noted in 63.01% of the females, 36.84% underwent LSCS while 3 cases underwent VBAC (Table 5).

Table 5: Pregnancy outcome of enrolled cases.

Outcome	Number of cases	% cases
FTND	1269	63.01
LSCS	742	36.84
VBAC	3	0.15

Status of accepting PPIUCD

879 of the enrolled cases (43.65%) cases accepted PPIUCD while remaining 1135 cases (56.35%) did not accept PPIUCD in study.

Reasons for not accepting PPIUCD

For those who did not accept PPIUCD, commonest cause was tubal ligation in 34.19%, followed by fear of pain in 18.94%, partner's refusal in 10.31% and refusal even after counselling regarding PPIUCD (10.04%) (Table 6).

Table 6: Reasons for not accepting PPIUCD.

Reasons for not accepting PPIUCD	Number of cases	% cases
Tubal ligation	388	34.19
Fear of pain	215	18.94
Partner's refusal	117	10.31
Refusal even after counselling regarding PPIUCD	114	10.04
Don't want immediately	103	9.07
Other contraceptive	83	7.31
Religious belief	75	6.61
Fear of cancer	23	2.03
Another trial for pregnancy	17	1.50

DISCUSSION

Approximately 20% of currently married women between the ages of 15 and 49 in India have an unmet need for contraception, of whom 7.2% have an unmet need for spacing methods.[10]

Intrauterine contraceptive device (IUCD) is very effective (99%) and an inexpensive family planning method which is reversible, offers 5-10 years of protection against pregnancy.[11] Globally, about one of the five women in reproductive age group use IUCD, while in India, the corresponding figure is about 3/100 women.[12] According to the National Family Health Survey 4, the current total unmet need for contraception is 12.9% and the unmet need for spacing is 5.7%.[13] This presents with short inter pregnancy interval and high fertility rate, contributing to high maternal and neonatal morbidity and mortality.[14] According to the World Health Organization's (WHO) Medical Eligibility Criteria (MEC), IUCD can be inserted within 48 hours post-partum, referred to as a post-partum IUCD (PPIUCD).[15] Even though expulsion rate for PPIUCD is higher, benefits of providing highly effective contraception immediately outweigh this disadvantage.[16] The Government of India provided IUCD free of cost, nonetheless, it still was largely underutilized. Hence, there is a need to identify factors that affect the acceptance of PPIUCD provided through a public health approach.

Demographic and baseline details

A total of 2014 patients were enrolled in the study. The mean age was noted to be 25.87 years, most common age group noted was 18-25 years (55.76%), followed by 26-30 years (28.75%). Most of the enrolled females were educated till secondary school (59.48%), followed by up to XIth or XIIth standard (21%). The statistics mentioned above correlate with the study conducted by Katheit et al, and by Maluchuru et al.[4,6]

Obstetric details of enrolled females

Commonest frequency of ANC visits was 4 to 6 (39.87%), followed by 1 to 3 (33.42%). Commonest obstetric history finding was previous live birth history in 59.38% cases, followed by primigravida (37.24%). Abortion history was noted in 2.78% while 12 cases of IUD history was noted.

In the study by Mishra et al, 54.72% females were primigavida, 34.37% were having parity status as 2.[5] Majority in the study had a future pregnancy plan after 3-5 years. The above results correlate with the study by Jairaj et al, and study by Vishwakarma et al.[7,8]

Outcome of pregnancy

FTND was noted in 63.01% of the females, 36.84% underwent LSCS while 3 cases underwent VBAC. Above results correlates with the study by Jairaj et al.[7]

Acceptance of PPIUCD

Total 879 of the enrolled cases (43.65%) cases accepted PPIUCD while remaining 1135 cases (56.35%) did not accept PPIUCD in study. In the study by Mishra et al, the acceptance rate was 17.57% while remaining 82.43% declined for PPIUCD.[5] In the study by Jairaj et al, acceptance rate for PPIUCD was 19.72% and declined rate was 80.28%.[7]

Reasons for not accepting PPIUCD

For those who did not accept PPIUCD, commonest cause was tubal ligation in 34.19%, followed by fear of pain in 18.94%, partner's refusal in 10.31% and refusal even after counselling regarding PPIUCD (10.04%).

In the study by Katheit et al, though majority of the women were aware of copper-T (interval IUCD) but few had ever heard of insertion in the postpartum period (PPIUCD) (73.55% vs. 5.79%).[4] The statistics obtained in this study correlates with the study by Maluchuru et al, and the study by Jairaj et al.[6,7]

The study had a few limitations. The long term follow-up of females who accepted PPIUCD was not possible because of limited time frame of data collection. Hence the continuation rate was not evaluated. The study was conducted at only one study centre and hence, the overgeneralisation of the results for whole Indian population should be done with caution.

CONCLUSION

The acceptance rate in study for PPIUCD was 43.65% which was higher than most of the published evidence. The common reasons for not accepting PPIUCD were tubal ligation, fear of pain, partner's refusal and no knowledge of PPIUCD.

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