

Immediate Postpartum Intrauterine Device Insertion and its outcome: a Prospective Study in a Tertiary Care Centre

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Background: In developing countries, the maternal mortality and morbidity associated with closely related pregnancies and abortions can be prevented by intervening immediately after delivery by providing women with insertion of IUCD. This study was intended to evaluate PPIUCD as a method of contraception immediately following the delivery. **Aims and Objectives:** To evaluate the acceptability of PPIUCD, various factors affecting its influence, and to study the follow-up complications. **Materials and Methods:** This study was conducted in the labour room at KIMS, Karad from January 2020 to May 2021. Women around 18-40 years, of 34-40weeks, were included. Pregnancies complicated with PROM>18 hours, obstructed labour, fever, anaemia, and PPH were excluded. After proper counselling, women were inserted with IUCD after 10min-48 hrs of delivery of placenta in vaginal or caesarean section and followed up at discharge and 6weeks. **Results:** Out of 8128 deliveries, 3534(43.6%) women had fulfilled medical eligibility criteria, out of which 140(40%) women had accepted the service among the counselled women of 350(9.90%). During follow up, 75.7% had no complaints at discharge and 84.2% at 6weeks. Few had excessive bleeding, pain in the lower abdomen, and no visible thread complaints. The overall expulsion rate at 6 weeks in this study was around 2.1% and the continuation rate was 97.8%. **Conclusion:** There is a need for proper counselling for PPIUCD and conduct workshops from the early weeks of pregnancy to cover the unmet needs of contraception.

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Introduction

The need for special health care services for women to prevent unwanted pregnancies should be started in the immediate post-partum period as many studies have shown that around 60% will resume sexual activity by 8-10 weeks and almost 100% by one year [1]. Early resumption of sexual activity coupled with early and unpredictable ovulation leads to many unwanted pregnancies in the first year postpartum. Moreover, in developing countries particularly, women who once go back home after delivery do not return for even a routine postpartum check-up and leave aside contraception. [2-4].

Postpartum insertion of IUCD (PPIUCD) is a method of postpartum contraception that may be utilized to overcome the unmet need for contraception, in a single hospital visit during institutional delivery.

It's a non-hormonal, immediately reversible, cost-effective, long-acting contraceptive that can be used immediately after delivery with no effect on lactation [5-7]. promoting the health of women and newborns by preventing the complications associated with closely spaced pregnancies [5]. This method of contraception is easy and safe than delayed and interval insertion and it can be inserted by a skilled birth attendant with minimal visits for contraceptive refills [8,9]. With the implementation of promoting deliveries at an institutional level, the Government of India (GOI) has started the JSY scheme (2009) for providing women access to immediate PPIUCD services. To achieve the objective of providing quality services during the postpartum period, IUCD has been implemented in the immediate post-partum in National Family Welfare Programme in several states since March 2010.

This study was conducted, to evaluate the acceptability of PPIUCD, various factors affecting its influence and to study the follow-up complications associated with PPIUCD. This study was also intended to evaluate PPIUCD as a method of contraception immediately after the following delivery thus helping in reducing maternal mortality in developing countries.

Aim

Study of awareness, acceptance and utility of immediate postpartum intrauterine device insertion in a tertiary care centre.

Objectives

- To determine the proportion of women accepting PPIUCD.
- To determine different factors influencing its acceptance.
- To determine the complications of immediate post-partum IUCD.

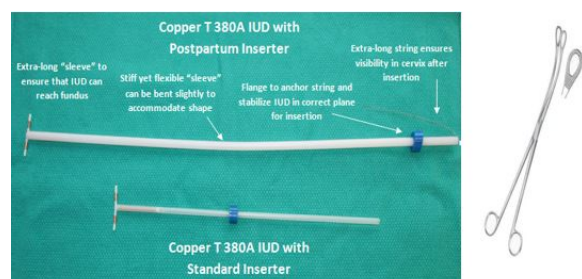
Material and Methods

Study setting: This was a prospective study conducted in the labour room at a tertiary hospital in the department of obstetrics and gynaecology from January 2020 to July 2021. The study population of 140 postpartum women were selected willfully after proper counselling, and consent and were inserted with IUCD after 10 min-48 hrs of delivery of placenta in vaginal (post placental insertion or postpartum within 48hrs) or via caesarean section and followed up at discharge and 6weeks.

Inclusion criteria: All parous women of 18-40 years of age belonging to 34-40 weeks of gestational age were included in the study after willful consent and counselling.

Exclusion criteria: Pregnant women with fever, anaemia, PROM >18hrs, PPH, extensive genital trauma, congenital malformations of the uterus, and not giving informed consent were excluded.

Data Collection Procedure: Cu-T380A with postpartum inserter was inserted immediately after delivery of the placenta before suturing of episiotomy in post placental insertion after the management of the third stage of labour or a normal Copper T 380A with standard inserter can also be inserted using Kelly's forceps which has a curvature at the proximal end to accommodate the angulation while entering the uterus devoid of lock.



In the post-partum IUCD method of insertion, it

Was inserted within 48hrs of delivery and during intra-caesarean, it was inserted in the fundus with hands and thread is guided downwards to the cervix. They were followed up during the hospital stay and later were given a client card mentioning the type of IUCD, date of insertion and when to come for follow-up. Counselling regarding normal post-partum symptoms and other IUCD side effects like foul-smelling discharge, lower abdominal pain with fever, chills, and suspicion that IUCD has fallen out was explained.

Ethical consideration: The current study was conducted after getting permission from the institutional ethical committee. Written informed consent was obtained from the study participants.

Statistical analysis: The data was collected using standard, semi-structured, pre-validated case record proforma. During the follow-up visits, complaints were recorded and data was entered in excel sheets and analysis was done using epi-info software and the following results were obtained. The frequencies are described in terms of tables and charts. Necessary statistical methods were used for analysis.

Results

Table 1: Distribution of cases according to an age group who accepted PPIUCD.

Age (Years)	No of the persons who accepted PPIUCD
19-25	38(27.1%)
25-30	99(70.7%)
30-35	3(3.09%)
35-40	0
40-45	0
TOTAL	140

Table 1 shows that the majority of the participants belonged to the age group of 25 to 30 years (70.7%), followed by 19 to 25 years (27.1%).

Table 2: Study population who accepted PPIUCD based on their socio-economic status.

Socio-Economic Status	No. Of People Who Accepted PPIUCD
Upper(I)	10 (7.14%)
Upper Middle (II)	20 (14.28)
Lower Middle (III)	30 (21.42%)
Upper Lower (IV)	75 (53.5%)
Lower (V)	5 (3.57%)
Total	140 (100%)

Table 2 shows that the majority of the subjects belonged to the Upper Lower socio-economic class (53.5%), followed by Lower Middle socioeconomic class (21.42%).

Table: 3: Distribution of cases according to education status.

Education Status	No. of Women
Uneducated	18 (12.8%)
Primary education	78 (55.7%)
Secondary education	32 (22.8%)
Graduation and higher	12 (8.5%)
TOTAL	140 (100%)

Table 3 shows that majority of the study participants have completed their Primary education (55.7%), whereas 22.8% had completed their Secondary education. 12.8% of subjects were uneducated.

Table: 4: Proportion of acceptance of PPIUCD in a different mode of delivery.

Mode of Delivery	No of People WHO accepted PPIUCD
Normal Vaginal Delivery	91 (65%)
LSCS	49 (35%)
Total	140 (100%)

Table 5: Distribution of study population according to awareness levels.

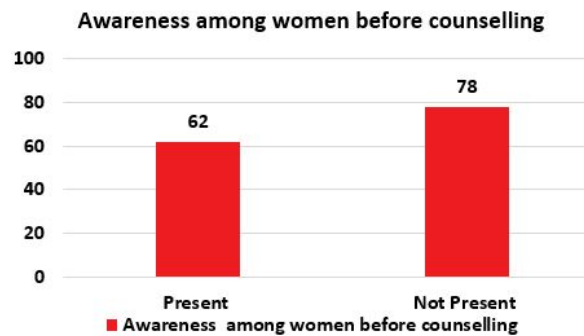
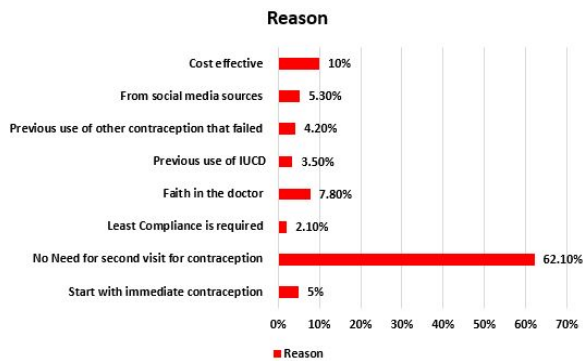


Table 6: Distribution of study population according to the period done for counselling of IUCD insertion.

Counselling	No of People
ANC	42(30%)
Early Labour	98(70%)
Total	140 (100%)

44.28% of study subjects were aware of counselling for IUCD insertion. During the study, 70% of study subjects were provided counselling on IUCD insertion during early labour, whereas 30% were provided counselling on IUCD insertion during their ANC period only. (Table 5, 6)

Table:7: Reasons for Acceptance Of PPIUCD



In our study subjects, when we assessed the reasons for acceptance of PPIUCD, 62.1% reported no need for a second visit for contraception, whereas 10% found it cost-effective, 7.8% had faith in doctors etc. The detailed distribution of reasons is mentioned in table 7.

When we assessed the distribution of cases according to complaints during follow up, we observed that majority of the cases did not have any complaints at the time of follow up. At the time of follow up, 4.9% complained of thread not coming out, while 3.5% had an excessive white discharge. (Table 8) Hence in the current study, we observed that 40% acceptance of PPIUCD after counselling. (Table 9)

Table 8: Distribution of cases according to complaints during follow up.

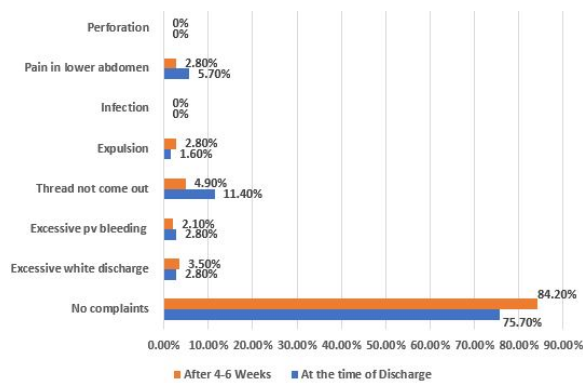


Table 9: Proportion of Women Accepting PPIUCD.

Patient	Nu mb er	Perce ntage
Total number of Patients delivered in the study period	812	100%
Patients fulfilling medical eligibility criteria	353	43.6%
Patients counselled for PPIUCD	350	9.90%
Patients who accepted the service and participated in the study	140	40%

(% of patients accepting PPIUCD after counselling)

Discussion

The post-partum period is the ideal platform for the provision of family planning services to reduce unintended abortions caused by the inadequate spacing of births. [5]. This study was done to provide immediate contraception to post-partum women by insertion of IUCD. Awareness about the postpartum insertion of IUCD among the pregnant woman admitted to the labour room for delivery in this study was around 44%. According to the studies done by Katheit G [10]. Kumar S et al [11]. the awareness levels were varied from 5.79% to 53.5% [2,3,4]. However, this is similar to the study by Radha Nair [12]. et al, which was around 38% done in Kerala. This level of awareness in this study can be attributed to the fact of counselling during regular ANC visits in a booked pregnant woman.

Around 70% of women accepted PPIUCD when they were counselled in the early stage of labour and around 30 % of women accepted it when counselled during the ANC period. This indicates that pregnant women are highly motivated during the early stages of labour. These findings, however, are in reverse of the study done by Neelima Agarwal et al [13]. where almost 43.9% underwent PPIUCD insertion when counselled during the antenatal period and 23.4% during the labour period. So there is a need for more antenatal counselling regarding the usage of postpartum family planning services. The majority of them who had accepted PPIUCD were educated (87.1%) at least to a primary level which was similar to the study done by Mishra S et al [14]. and Safwat et al. [15]. where women with formal education had an acceptance of 19.4 %. This finding confirms the importance of education in deciding on future pregnancies. In this study, 69.8% of women belong to the urban area and 31.1% were from the rural area. These findings were similar to the study done by Jyoti Rokade et al [17]. where 62.5% of patients are from the urban area and 37.5 % are from the rural area.

According to the study done by Dr Srivastav R et al [18]. shows that urbanization and education of girls are important to know about contraception for accepting the PPIUCD services easily was similar in this study also. The socio-economic status of the study population also plays an important role in accepting PPIUCD. In this study, almost 57.1% who accepted PPIUCD belong to lower socioeconomic

Status according to modified Kuppaswamy's classification. This was similar to the studies done by Satyavathi et al. [19]. Gunjan Goswami [16]. and Sangeetha Jairaj et al. [20]. It may be because the study was conducted in a tertiary care centre where the majority of service receivers are low socio-economic people. As per this research, the major proportion of women accepted PPIUCD following a normal vaginal delivery which accounted for 65% and the remaining 35% following an LSCS. This is quite contradictory to other studies done by Manju Shukla et al [21]. Vidya Ramana et al. [22]. which were 60.87% and 83.73% accepted following a cesarean section. Even according to a study done by Jyoti Rokade et al [17]. 72.5 % of patients accepted PPIUCD via the Intra-caesarean method. In this study higher rate of acceptance following a vaginal delivery might be because a large proportion of women were counselled for PPIUCD in the early stages of labour thus motivating them for PPIUCD insertion.

And the major reason for acceptance of PPIUCD in this study was there is no need for a second visit for contraception i.e long-acting which accounted for 62.1%, 10% as it is cost-effective and the other 7.8% due to faith in the doctor. This is similar to the studies done by Satyavathi et al [19]. where 55.28% accepted because it is long-acting and 20.73% because it is safe. After insertion of PPIUCD, women are followed up at discharge and at 6 weeks .75% at the clinic,30% over the phone and the remaining 3.5% were lost to follow-up which was similar to the studies done by Mishra S et al (14) and Gunjan Goswami et al (16), where 23.05% and 30%.

During follow up 75.7 % of patients had no complaints at the time of discharge and 84.2% were not having any complaints at 4-6weeks. 11.4%, 5.7%, and 2.8% of women had complaints of not visible thread, pain in the lower abdomen, and excessive PV bleeding respectively which during follow up at 4-6 weeks period had reduced to 4.9%,2.8%,2.1% respectively. However, the expulsion rate was 1.6% and 2.1% at the time of discharge and 4-6 weeks of the period. This was similar to the study by Jyoti et al [17]. where the expulsion rate is 1.5% at 6 weeks of follow-up. According to this research, there was not a single patient with perforation or infection. This was similar to the Indian study carried out by Sujnanendra Mishra. [14]. The expulsion rates

According to Mishra S et al [14]. and Gunjan Goswami et al [16]. were 6.4% and 10% respectively. In this study, 3 women underwent removal, 2 at the time of discharge reason being a pain in the abdomen and family pressure, and the other at the end of 6 weeks, the reason being excessive PV bleeding.

Overall acceptance for PPIUCD in this study is 40% which was similar to studies done by Gunjan Goswami et al [16]. where acceptance is 66.8%. Other studies were conducted by Mishra S et al [14]. Jyoti et al [17]. and Vidyaramana et al [22]. showed an acceptance of 17.17%,30.3% and 8.55% respectively. This wide range of variation in acceptance among different researchers was found across the country due to different study settings, locality and diversity in socio-demographic characteristics.

Conclusion

PPIUCD is the only family planning method that is a highly effective, reliable, inexpensive, non-hormonal, reversible method and long-acting contraceptive method that can be initiated during the immediate postpartum period with negligible effects on lactation.

What does this study add to existing knowledge?

- There is a need for proper counselling for PPIUCD right from the early weeks of pregnancy along with educating the partner regarding its benefits to cover the unmet needs of contraception following delivery.
- There is a need for workshops to be carried out even at the peripheral health facilities to improve the access and acceptability amongst beneficiaries.

Authors Contribution: GP: Data collection, data entry and data analysis, ML: Manuscript preparation, review of literature, NSK: Article review, revisions, Data analysis.

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