



## Comparison Between Early Postpartum Iucd Insertion And Interval Iucd Insertion

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### Abstract

**Background:** The study aims to compare post-partum IUCD insertion done on Day 3 post-vaginal delivery and IUCD insertion after 6 weeks post-vaginal delivery in terms of

1. Rate of Expulsion
2. Discontinuation rates and its causes
3. Failure rate after 1 year

**Methods:** The study was conducted on 60 women, convenience type of non-probability sampling randomized into two groups, each group having 30 women. In first group, IUCD insertion was done on day 3 of post vaginal delivery. While IUCD insertion was done 6 weeks post vaginal delivery in second group.

**Results:** Out of total 60 cases, 69.3% women were primipara and 31.7% were multiparous. Difficulty in insertion was experienced in 2(6.7%) post-partum cases while it was observed in 01 (3.3%) case of interval IUCD insertion. Expulsion rates by end of 6 weeks was seen in 2 and 1 case of post-partum and interval IUCD insertion respectively while expulsion was reported in 1 case each at the end of 3 months. Overall expulsion by end of 1 year was 10% in post-partum IUCD insertion and 6.7% in interval IUCD insertion

**Conclusion:** Present study concluded that post-partum IUCD insertion is safe and effective method of contraception associated with relatively few side effects and lower failure rate while complication rates were similar in subjects with postpartum and interval IUCD insertion.

**Keywords:** Intra-uterine contraceptive device, Postpartum intrauterine device complications, Removal rate, Expulsion rates

### Introduction

Contraception methods by definition means to prevent unwanted pregnancy temporarily or permanently <sup>[1]</sup>. India is second largest populated country in the world accounting for 17.5% of world's population by adding around 25 million births every year, 65% of women in the first year postpartum have an unmet need for family planning <sup>[2,3]</sup>.

Most women do not desire a pregnancy immediately after a delivery but are unclear about contraceptive usage in postpartum period. In a recent study of

postpartum unintended pregnancies 86% resulted from nonuse of contraception and 88% ended in induced abortions <sup>[4]</sup>. Continuation of these pregnancies is also associated with greater maternal complications and adverse perinatal outcomes. In India, 65% women in the first year postpartum have an unmet need for family planning <sup>[3]</sup>. Hence, providing contraception in this sensitive period is important.

Thus, immediate postpartum family planning services need to be emphasized wherein the woman leaves the hospital with an effective contraception in place.

Increase in hospital deliveries provides an excellent opportunity to sensitize women and provide effective contraception along with delivery services.

An intrauterine contraceptive device (IUCD) has several advantages for use in postpartum period as it is an effective, long term reversible contraception, is coitus independent, and does not interfere with breast feeding.

Short inter-conception period after delivery puts a woman at increased risk of morbidity and mortality<sup>[5]</sup>. Immediate post-partum intrauterine contraceptive device (PPIUCD) insertion could fulfill a long-standing need for a reversible and effective, long term contraception, which does not interfere with breast feeding<sup>[3,6]</sup>.

In India, Copper T 380-A is being supplied free of cost by the government, to all health centers and private practitioners. This device is a proven highly effective and reversible spacing method of interval contraception, with effective protection for 10 years<sup>[3]</sup>. However, the device has not attained much popularity due to the myths and misconceptions amongst the general public and health care personnel. Besides, due to the fear of perforation and infection, and also, lack of proper training, most health care providers are reluctant in performing post-partum IUCD insertion<sup>[7]</sup>.

The efficacy of PPIUCD insertion without any added risk of infectious morbidity has also been reported by various studies<sup>[8-15]</sup>. Initiating IUCD use during immediate post-partum period has the added advantage of eliminating a six-week postpartum waiting period and an additional hospital visit. Many women also find the Intrauterine Contraceptive Devices (IUCD) to be very convenient; because it requires little attention once it is inserted<sup>[16]</sup>. Provision of IUCD in the immediate postpartum period (PP) offers an effective and safe method for spacing and limiting births. A good counseling cannot be overlooked in this regard. Many of these women welcome the opportunity to delay their next pregnancy when are counseled well. Opportunity for a success is excellent, because delivery provides a convenient opportunity for the woman to receive IUCD services. This is particularly important for women who have limited access to medical care. A new mother is likely to be motivated to consider long- acting methods<sup>[17]</sup>.

Studies have shown that immediate postpartum insertion of IUCD i.e. just after expulsion of placenta (within 48 hours) is associated with increased expulsion rates<sup>[8-15]</sup>.

In our study IUCD will be inserted on Day 3 post vaginal delivery, when the size of the uterus becomes smaller and cervical os gets closed, so less chances of expulsion of IUCD are to be expected. The present study aimed to compare post-partum IUCD insertion (Day 3) and interval IUCD insertion (i.e. after 6 weeks post-vaginal delivery) in terms of: rate of expulsion, discontinuation rates and its causes and failure rate after 1 year.

### Methodology:

The study is prospective observational clinical study conducted at Department of Obstetrics and Gynecology, MGM Hospital, Navi Mumbai. A specially designed modified Performa from PPIUCD reference manual was used to collect the data of women attending hospital, which included patient's particulars, time of counseling, type of IUCD insertion, instruments used for insertion, with reporting format including type of follow up (clinic visit/ telephonic), time of follow up at (6 weeks/ >6 weeks) and finding at follow up (expulsion/ infection/ missing threads/ failure/ perforation/ request or reason for removal, bleeding from vagina and pain). All women delivering by vaginal route, opting and giving consent for IUCD insertion on day3 and willing to follow up were included in study. While women with post-partum hemorrhage, previously scarred uterus, postpartum fever/sepsis, tumors distorting uterine cavity and patients with metabolic and systemic illness were excluded from study.

Convenience type of non-probability sampling was used for selection of study subjects. Copper-T 380 A in sterile package was used. A total of 60 consecutive eligible females, giving informed consent were selected for study. These were divided into one of the following two groups (30 each):

**Post-partum Group:** A total of 30 woman in which IUCD insertion is done on Day 3 post vaginal delivery.

**Inter-conception Group:** A total of 30 Women in which IUCD insertion is done after an interval of 6 weeks post vaginal delivery.

At discharge, patients were given the following instructions-

- To check for Copper-T threads periodically.
- To follow up for check up in the OPD at 6 weeks, 3 months, 6 months and 1 year after CuT insertion.

- To report to the OPD immediately in case of irregular or heavy bleeding PV, excessive lower abdominal pain, fever, white discharge PV, threads not felt etc.

**Results:**

**Table 1. Distribution Of Study Cases As Per Age Group**

AGE (YEARS)	NUMBER	PERCENTAGE
20-25	32	53.33%
26-30	18	30.00%
>30	10	16.67%
<b>TOTAL</b>	<b>60</b>	<b>100.00%</b>

**Table 2. Distribution Of Study Cases As Per Parity**

PARITY	NUMBER	PERCENTAGE
PRIMIPARA	41	68.33%
MULTIPARA	19	31.67%
<b>TOTAL</b>	<b>60</b>	<b>100.00%</b>

**Table 3. Distribution Of Study Cases As Per Type Of Insertion**

TYPE OF INSERTION	NUMBER	PERCENTAGE
POSTPARTUM (DAY 3)	30	50.00%
INTERVAL	30	50.00%
<b>TOTAL</b>	<b>60</b>	<b>100.00%</b>

**Table 4. Comparison Of Study Group As Per Ease Of Insertion**

EASE OF INSERTION	INSERTION ON POST-PARTUM DAY 3	INSERTION DURING INTERVAL PERIOD	TOTAL
EASY	28	29	57
DIFFICULT	02	01	03
<b>TOTAL</b>	<b>30</b>	<b>30</b>	<b>60</b>
<b>p-value – 1.0</b>			

**Table 5. Comparison Of Study Group As Per Complications During Follow-Up**

COMPLICATION DURING FOLLOW-UP	INSERTION ON POSTPARTUM DAY 3	INSERTION DURING INTERVAL PERIOD	TOTAL	p-value
BLEEDING	01	03	04	0.61
DISCHARGE P/V	02	01	03	1.00
PAIN IN ABDOMEN	02	04	06	0.67
PID	00	00	00	-NA-
MISSING THREADS	01	01	02	1.00

**Table 6. Comparison Of Study Group As Per Expulsion Rates During Follow-Up**

EXPULSION RATES	INSERTION ON POST-PARTUM DAY 3	INSERTION DURING INTERVAL PERIOD	TOTAL	p-value
FROM INSERTION TILL 6 WEEKS	02	01	03	1.00
FROM 6 WEEKS TO 3 MONTHS	01	01	02	1.00
FROM 3 MONTHS TO 6 MONTHS	00	00	00	-NA-

**Table 7. Comparison Of Study Group As Per Expulsion By The End Of 1 Year**

EXPULSION BY END OF 1 YEAR	INSERTION ON POST-PARTUM DAY 3	INSERTION DURING PERIOD	TOTAL
NO	27	28	55
YES	03	02	05
TOTAL	30	30	60
p-value 1.0			

**Table 8. Comparison Of Study Group As Per Requirement Of Iucd Removal By End Of 6 Months**

REMOVAL BY END OF 6 MONTHS	INSERTION ON POST-PARTUM DAY 3	INSERTION DURING PERIOD	TOTAL
NO	24	24	48
YES	03	04	07
TOTAL	27	28	55
p-value 1.0			

**Table 9. Comparison Of Study Group As Per Cause Of Removal**

CAUSES OF REMOVAL	INSERTION ON POST-PARTUM DAY 3	INSERTION DURING PERIOD	TOTAL
BLEEDING	01	02	03
DISCHARGE P/V	00	00	00
PAIN IN ABDOMEN	01	01	02
FOR CONCEPTION	01	01	02

**Discussion:**

Copper T 380A IUCD is a highly effective, non-hormonal method that can be safely used by all women regardless of breastfeeding status during this interval [6].

Baseline data: Most of the females were in age group of 20-30 years (83.3%) while 16.67% women were above 30 years of age. Out of total 60 cases, 69.3% women were primipara and 31.7% were multiparous.

Immediate complications: Difficulty in insertion was experienced in 2(6.7%) post-partum cases probably because of painful exposure to cervix due to episiotomy and vaginal lacerations while it was observed in 01 (3.3%) case of interval IUCD insertion. Pain in abdomen and bleeding was the most common complication observed in cases of interval IUCD (13.3% and 10%) while pain in abdomen and P/V discharge was common complication seen in post-partum group (6.7% each). Missing threads were reported in 01 case each in post-partum and interval group respectively.

Jawadkar A et al [10] in a similar study observed 17% has mild discomfort during insertion and only 3.40% has painful insertion in post-partum group. Major complications encountered were abdominal pain and bleeding 13.6% each.

Expulsion Rates: Expulsion rates by end of 6 weeks was seen in 2 and 1 case of post-partum and interval IUCD insertion respectively while expulsion was reported in 1 case each at the end of 3 months. Overall expulsion by end of 1 year was 10% in post-partum IUCD insertion and 6.7% in interval IUCD insertion. The difference was statistically non-significant (p=1.0).

Gupta A et al [12] observed expulsion rate of 2% and 6.6% in interval insertion group and post-partum group. Difference was statistically non-significant.

Removal rate: Removal rates by the end of 6 months was 11.1% and 14.3% in post-partum and interval IUCD group respectively (p=1.0). Complications like bleeding and pain in abdomen was the reason for removal in 5 out of 7 cases while trying to conceive was reason in other 2 cases.

Mohan H et al <sup>[11]</sup> observed cumulative rate of removal over 6 months follow-up after PPIUCD insertion was 6.5%. The rate of removal for insertion group in our study was 7% which is similar to PPIUCD group.

### Conclusion:

Present study concludes that post-partum IUCD insertion is a safe and effective method of contraception associated with relatively few side effects and low failure rate. Complications rates were similar in subjects with post-partum and interval IUCD insertion. Thus, counselling regarding IUCD insertion should be done during pregnancy as it can be safely inserted in post-partum period of normal vaginal delivery and can be continued even in the presence of breast feeding with no side effects to babies as compared to hormonal contraceptives.

We thus recommend that post-partum IUCD counselling services should be strengthened and its use should be promoted in wake of its minimal side effects and complications.

In Indian context, PPIUCD is preferable since most of the patients do not come back for interval contraception. There have been accidental conception leading to induced abortions and unwanted deliveries which in turn leads to unnecessary morbidity and mortality to the mother.

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