

A Prospective Study on Evaluation of Clinical Outcome of Ppiucd Insertion after Normal Vaginal Delivery and Cesarean Section

Richa Roy¹, Mamta Singh²

¹Junior Resident(Academic), Department of Obstetrics and Gynaecology, Nalanda Medical College and Hospital, Patna, Bihar, India.

²Professor, Department of Obstetrics and Gynaecology, Nalanda Medical College and Hospital, Patna, Bihar, India.

Corresponding Author: RICHA ROY, Post Graduate

ABSTRACT

INTRODUCTION:

PPIUCD is a promising approach in the field of family planning. Both vaginal insertion and intracesarean insertion of PPIUCD are safe in terms of complications and effective for spacing and limiting births.

OBJECTIVE:

Evaluation of safety and efficacy of vaginal and intra-cesarean insertion of PPIUCD.

MATERIALS and METHODS:

This prospective study was conducted in Department of Obstetrics and Gynaecology, NMCH Patna from August 2017 to August 2018.

IUCD used was CuT-380A. Study subjects were enrolled according to exclusion criteria and informed consent was taken. Patients were followed up at 4 weeks, 3 months and 6 months.

RESULTS:

This study shows that PPIUCD is a promising method of contraception. It was highly acceptable, easily available method of contraception with only a few complications.

The most common complication was found to be missing thread in both the groups (8% in vaginal group Vs 10% in caesarean group); which was followed by pain abdomen (6% in vaginal group Vs 5% in caesarean group).

There was no complication of perforation or pregnancy in both the groups.

CONCLUSION:

Patient satisfaction was good in both methods of PPIUCD insertion.

Use of IUCD in postpartum period can provide long term, safe, reversible, coital independent and effective contraception.

KEYWORDS: PPIUCD, vaginal insertion, transcesarean insertion, Cu-T 380A.

Date of Submission: 07-11-2019

Date of Acceptance: 23-11-2019

I. Introduction

India is the 1st country to introduce family planning services. Postpartum period is the most sensitive time of woman's life when she is in contact with health care facility and can be motivated for family planning.

In India, 65% of women in the first year postpartum have an unmet need for family planning, out of which only 26% of women are using any method of contraception. India has one of the highest numbers of maternal death in the world. Short intervals between births are linked to higher maternal and child mortality and morbidity¹. Family planning can avert nearly one-third of maternal deaths and 10% of child mortality when couples space their pregnancies more than two years apart.² Cu-T380A is highly effective, safe, long acting, coitus independent and rapidly reversible method of contraception with few side effects. It is most cost effective method of contraception today. Most women find IUCD to be very convenient because it requires little action once it is inserted. ¹Postpartum women need a range of effective contraceptive methods to be able to prevent an unplanned pregnancy, within a short interval. ^{1,2}Postpartum IUCD insertion can be done within 10 minutes of vaginal delivery, intracesarean or within 48 hours of delivery.

According to the World Health Organization Medical Eligibility Criteria, an IUCD can be inserted in the 48 hours postpartum, referred to here as a postpartum IUCD (PPIUCD), or after six weeks following a birth³. Advantages of insertion of an IUCD after delivery are that the discomfort related to interval insertion can be avoided and any bleeding from insertion will be disguised by lochia.⁶ A 2010 Cochrane review concluded

that PPIUCDs were a safe and effective contraceptive method. In India the various methods of family planning being used are (1) Female sterilization (2) Male sterilization (3) oral contraceptive pills (4) male barrier method and female barrier method (5) injectable contraceptive (6) IUCD .Among the options available, the multi-year cost of the Copper T 380A IUD makes it one of the most cost-effective contraceptive options available. This study was conducted to evaluate the safety and efficacy of Cu T 380A in women delivering vaginally or by caesarean section, a long term reversible method that can serve as an alternative for sterilization for many women.

II. Objective

This study was conducted to evaluate safety and efficacy of postpartum IUCD insertion in vaginal delivery as well as cesarean section.

In India, the 2005–2006 National Family Health Survey (NFHS) reported that 61% of births were spaced less than three years⁴ and that 22% of married women had an unmet need for family planning. . A subsequent stratified analysis suggested that 65% of women in the first year postpartum had an unmet need for family planning.⁵In view of this scenario prevailing in our country, this study aimed to prevent unintended pregnancies and subsequent safe and unsafe abortions.

III. Material And Methods

This was a prospective and longitudinal study.

Out of 2100 deliveries conducted during the study period, 918 were eligible for PPIUCD insertion. Counseling for PPIUCD was done during the antenatal visits so that the patients can take an informed decision. Those willing for immediate postpartum insertion of Cu T 380 A were included in the study group and informed consent was obtained.

Study participants were recruited through hospital antenatal clinics. Postpartum contraception was routinely discussed at prenatal visits.

EXCLUSION CRITERIA

48 hours post delivery

Puerperal Sepsis

Chorioamnionitis

Prolonged Rupture of Membranes >18 hours

Unresolved PPH

Allergy to copper

Diabetes Mellitus

Active Pelvic Inflammatory Disease

METHOD OF INSERTION

• In case of vaginal delivery:

Bimanual examination was performed to evaluate the cervix and the uterus after the delivery of the placenta and ensured empty cavity with contracted uterus. Cu-T 380A was taken out from insertion device and inserted with all aseptic precautions with a Kelly's forceps and fundal placement was ensured. The string was cut to the level of the cervix.

• In case of cesarean section:

CuT was placed high up at the fundus of uterus manually holding the CuT in between middle and index fingers of the hand and passed it through the uterine incision and slowly withdrawing our hand.

SAFETY ANALYSIS:

• Safety was assessed on the basis of patients' complaints with respect to excess of bleeding or foul discharge and if any pain. Complications such as expulsion of IUCD, pelvic infection, displacement and perforation (if any) were noted.

FOLLOW UP:

Patients were followed up at **4 weeks, 3 months and 6 months** and were explained about **warning signs:**

• Bleeding

• Foul smelling lochia

• Fever

• Lower abdominal pain

During follow up visit, detailed history and physical examination was done along with radiological investigation as and when needed. Thread was visualized under per speculum examination and trimmed.

STATISTICS USED:

- Data entry was done using statistical package for the social science's version 17.0 for statistical analysis. Descriptive data were summarized as percentage or means.
- Paired Chisquare test was used to measure the strength of association between variables
- A p-value of <0.05 was considered to be statistically significant.

IV. Results

A total of 2100 deliveries during the study period were done. Among these deliveries 918 women were eligible for PPIUCD insertion. A total of 200 women (21%) women accepted PPIUCD insertion, while 718women (79%), declined insertion. Out of total 918 women, who were eligible after normal delivery was 523. Of these, 52 (10% of normal delivery) women had a post placental insertion and 10 (2% of normal delivery) woman had post- partum insertion. Among those, who had caesarean section, number of eligible women was 394.Out of these 138 (35% of caesarean section) had transcesarean PPIUCD insertion.

MODE OF DELIVERY	TOTAL N= 918	ACCEPTED N=200	DECLINED N=618	P-value
NORMAL VAGINAL DELIVERY	523(57%)	62(12%)	461(88%)	0.004
LSCS	394(43%)	138(35%)	256(65%)	

Table1: ACCEPTANCE OF PPIUCD IN RELATION TO MODE OF DELIVERY

This table shows acceptance rate for PPIUCD is better in caesarean section as compared to vaginal delivery. Caesarean section shows significant association (p=0.004) in relation to normal vaginal delivery.

Reason	Number	Percent
Long Term	118	59%
Reversible	60	30%
Safe	41	20.5%
Fewer side effects	36	18%
Non hormonal	21	10.5%
No remembrance once inserted	17	8.5%
No interference with breastfeeding	11	5.5%

Table2: REASONS FOR PPIUCD ACCEPTANCE

- Table 2 shows that more than half (59%) of those women’s who accepted PPIUCD were due to the reason of its long term effect. About one third (30%) were accepted due to reversibility and 20% for safe and fewer side effects each.
- Total percentage more than 100% shows there were multiple responses.

COMPLICATION	VAGINAL GROUP	CESAREAN GROUP
EXPULSION	3%	1%
BLEEDING	5%	4%
PREGNANCY	0	0
PERFORATION	0	0
PAIN ABDOMEN	6%	5%
MISSING THREAD	8%	10%

Table3: COMPLICATIONS IN VAGINAL AND CESAREAN GROUP

- There was no complication of perforation or pregnancy in both the groups.
- The most common complication was found to be missing thread in both the groups (8% in vaginal group Vs 10% in caesarean group);which was followed by pain abdomen (6% in vaginal group Vs 5% in caesarean group).

Reason	Number	Percent
Prefer to use another method	215	30%
Satisfied with previous contraceptive method	107	15%
Need to discuss with my partner	86	12%
Fear of pain and heavy bleeding	71	10%
Partner refusal	57	8%
Don't want contraception immediately	50	7%
No reason	14	2%

Table 4: REASONS FOR REFUSAL OF PPIUCD

Table 4 shows total of 718 parturients (79%) declined the use of PPIUCD

Among these majority preferred to another form of contraception (30%). The percentage was more than 100% as there were multiple responses.

V. Conclusion

PPIUCD is a promising method of contraception in terms of safety and efficacy. It does not interfere with breastfeeding, is convenient for both women and their health care providers, is associated with less discomfort and fewer side effects than interval insertions.⁷ IUCDs are used by only two percent of current users of contraception in India.⁴

This approach of immediate postpartum IUCD insertion is more applicable to our country where delivery may be the only time when a healthy woman comes in contact with healthcare personnel.

Overall acceptance of PPIUCD seen in this study was generally good (21%) despite a very low usage of the interval IUCD in India .A plausible explanation of the relatively high acceptance of PPIUCD was the newness of the immediate postpartum IUCD in the community.

A significant number of women declined the PPIUCD because of non-partner involvement. This reveals the importance of partner involvement during counseling and decision making. In our setup women who visit the antenatal clinic are usually not accompanied by their partner and therefore couple counseling is lost during this period.

In Asia postpartum study, husband' s desire for IUCD removals was a significant reason for removal, emphasizing the importance of involving the husband in prenatal counseling.⁸ Absence of uterine perforation with extremely low rate of expulsion (3.1%), Pelvic infection(4.3%) and lost strings (12.7%) are strong indicators of safety.Expulsion rate was similar to a multi country study done in Belgium, Chile and Philippines which showed the rate of expulsion at 1 month, ranging from 4.6-16.0%⁹. The position of cu T was in situ in 96.99% of subjects, ultrasound was used in 22.56% to confirm location where threads were not visible in the

vagina. So the PPIUCD was demonstrably safe, having no reported incidence of perforation, low rate of expulsion, pelvic infection and lost strings.

References

- [1]. Rutstein S: Further Evidence of the Effects of Preceding Birth Intervals on Neonatal, Infant, and Under-Five-Years Mortality and Nutritional Status in Developing Countries: Evidence from the Demographic and Health Surveys. DHS Working Papers No. 41. Macro International; 2008.]
- [2]. Cleland J, Bernstein S, Ezeh A, Faundes A, Glasier A, Innis J: Family planning: the unfinished agenda, *Lancet* 2006, 368:1810-827. Pub Med Abstract | Publisher Full Text
- [3]. World Health Organization: Medical Eligibility Criteria for Contraceptive Use. 4th edition. Geneva: World Health Organization; 2010
- [4]. International Institute for Population Sciences (IIPS) and Macro International: National Family Health Survey (NFHS-3), 2005–06, India, Key Findings. Mumbai, IIPS, 2007. Accessed at <http://www.measuredhs.com/pubs/pdf/SR128/SR128.pdf> website, on March 14, 2013.
- [5]. Borda M: Family Planning Needs during the Extended Postpartum Period in India. Access Family Planning Initiative Brief, 2009. Accessed at http://www.accesstohealth.org/toolres/pdfs/India_Analysis.pdf website, on March 14, 2013.
- [6]. Shukla M, Qureshi S, Chandrawati. Post placental intrauterine device insertion -- A five year experience at a tertiary care centre in north India. *Indian J Med Res* 2012; 136: 432-5.
- [7]. Kapp N, Curtis KM. Intrauterine device insertion during the postpartum period: a systematic review. *Contraception* 2009; 80: 327-36.
- [8]. May K, Ngo, T D, Hovig D. Expanding contraceptive choices for women: Promising results for the IUD in sub-Saharan Africa. London: Marie Stopes International, 2011.
- [9]. Blanchard H, Mac Kaig C. ACCESS-FP Program. 2006. Postpartum contraception: Family planning method birth spacing after childbirth.

RICHA ROY, Post Graduate. "A Prospective Study on Evaluation of Clinical Outcome of Ppiucd Insertion after Normal Vaginal Delivery and Cesarean Section." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, vol. 18, no. 11, 2019, pp 47-51.