

## To Study the Acceptance of Postpartum Intrauterine Contraceptive Device at Surat Municipal Institute of Medical Education and Research

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### Abstract

*Aim:* 1. To determine the proportion of women accepting immediate PPIUCD. 2. To assess the safety, efficacy, continuation and expulsion of IUCD insertion in immediate post partum period and also compare the risk and complication of postpartum IUCD. *Setting and Design:* The study was a prospective hospital based analytical study to assess the acceptability and safety of PPIUCD use in women after delivery. The data were recorded in enclosed proforma and data analysis was done using EPI-info software applying chi square test. The study was conducted at the SMIMER Hospital, a tertiary care teaching hospital attached to SMIMER Medical College, Surat, Gujarat, India. *Materials and Methods:* A prospective analytical study was conducted during the period from August 2014 to August 2015, among the eligible postpartum women, at a tertiary care hospital, SMIMER Hospital, Surat. Counseling was done about IUCD. After obtaining consent, Cu-T 380 was inserted in 179 women and was followed up to 6 weeks. *Statistical Analysis Used:* Data analyzed using EPI-info software applying Chi square test. *Results:* Acceptance of PPIUCD was around 18.8%. Majority of our subjects were in 21-25 years of age group. Women undergoing normal vaginal delivery accepted PPIUCD more frequently than those who

underwent Caesarean section. Main reported complications were pain abdomen (10.21%) and bleeding (9.48%). Expulsion rate was 5.83%. 81.75% clients continued to use PPIUCD at 4-6 weeks. *Conclusion:* Even though expulsion rate was high, acceptance and continuation were high for IUCD when it was inserted in postpartum period.

**Keywords:** Contraception; Complications; Expulsion Rate.

### Introduction

Contraceptive methods by definition means, to prevent unwanted pregnancy by temporary or permanent methods<sup>1</sup>. Initially contraception was meant for only women. Intrauterine contraceptive device like Cu T-380A provides contraception up to 10 years [1]. India is second largest populated country in the world with 120 million according to 2011 census [2]. It contributes 17.5% of world's population by adding around 25 million births every year [3]. As a national problem, population over growth, as seen in all developing countries including India, is a major culprit hindering the growth of country in all its aspects.

With the advancement in technology and medical science & improvements in healthcare delivery system, we have decreased our death rate, Infant mortality rate and thus, average life expectancy of an Indian has increased to around 70 years. India is a nation with different cultures and beliefs and itself is a continent. As a matter of fact, Govt. of India can't enforce one child norm or compulsory sterilization on the population, so we need to educate them for birth spacing.

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A 65% of women are having unmet need of family planning in the first year of post partum period<sup>3</sup>. The common reasons for unmet need are unsatisfactory services, lack of information, and fear about side effects of contraceptive method. A woman will not be ready physically to conceive and undergo delivery within 24 months of prior delivery. Studies were found that conceiving within two years leads to adverse events like abortion, premature labour, postpartum haemorrhage, low birth weight babies, fetal loss and sometimes maternal deaths. Hence advising and practicing contraception with in postpartum period is good for women's health [4].

Disseminating family planning methods during postpartum period will be convenient to practice and easy to follow up for complications and adverse events.

Post partum intra uterine copper T insertion has been established as a long-term effective, reliable and reversible method of contraception as it offers numerous advantages like easy insertion, no adverse effect on breast-feeding, cost effectiveness, protective against unwanted pregnancy and consequently abortion and relief from overcrowded outpatient facilities. In addition, insertion complains are masked by lochial blood and cramping.

Although postpartum IUCD service was introduced since 2010 in facilities with high case load of deliveries, its acceptance is very low. In India only 2% of married women of reproductive age use IUCDs.

The current approach in Family Planning emphasizes on offering high quality contraceptive services among eligible clients on a voluntary basis. An important component of the program is promoting adequate spacing of births. The National Population Policy 2000 has recognized, as its immediate objective, the task of addressing the unmet need for contraception to achieve the medium term objective of bringing the Total Fertility Rate (TFR) to replacement level by 2010 (i.e. to reduce the Net Reproductive Rate to 1) so as to achieve the long-term goal of population stabilization by 2045.

Apart from lactational amenorrhea, the methods which can be used by the women during postpartum period are barrier methods, progesterone only pills, sterilization (puerperal tubectomy) and IUCD (postpartum IUCD).

IUCD insertion has many advantages over other methods like simplicity, minimal motivation, reversibility, free of cost availability, virtually no systemic side-effects, and high continuation rate.

Insertion of IUCD in postpartum period has additional advantages of safety due to blunt insertion

technique, and certainty of non-pregnancy of woman. Integrating IUCD insertion with delivery services optimizes opportunities for women to obtain an appropriate long term, reversible family planning method before returning home. Also it is seen that women are highly motivated and receptive to accept family planning methods during the postpartum period and this is the best time when a woman is in contact with the health care facility

Purpose of this study was to evaluate post-placental IUCD insertion and highlight its benefits.

#### *Objectives*

1. To determine the proportion of women accepting immediate PPIUCD.
2. To assess the safety, efficacy, continuation and expulsion of IUCD insertion at immediate post partum period and also compare the risk and complication of postpartum IUCD.

#### **Materials and Methods**

##### *Study Design*

The study was a prospective hospital based analytical study to assess the acceptability and safety of PPIUCD use in women after delivery. The data was recorded in enclosed Proforma and data analysis was done using EPI-info software applying Chi square test.

##### *Study Setting*

The study was conducted at the SMIMER Hospital, a tertiary care teaching hospital attached to SMIMER Medical College, Surat, Gujarat, India.

##### *Study Period*

From August 2014 to August 2015.

##### *Sample Size: 179*

##### *Study Population*

The study population included women who delivered at maternity ward at SMIMER Hospital during the study period who gave the consent for post partum IUCD insertion.

##### *Inclusion Criteria*

Women delivered vaginally or by caesarean section

between 36-42 weeks of gestation who delivered a healthy live baby, prior consent obtained for PPIUCD after counseling, willing to have Cu T inserted and follow up.

*Exclusion Criteria*

Patients refusal, anaemia ( haemoglobin <10 g/ dl), unresolved PPH, rupture of membranes >18 hours, obstructed labour, tumors distorting uterine cavity like fibroid, congenital malformation of uterus, active STD, allergy to copper, temperature >38 degree C, AIDS patients not on ART and patients undergoing post partum tubal ligation or vasectomy of husband.

*Counseling of the Patients*

Women were sensitized about advantages and importance of family planning methods during ANC visits, at the time admission in labour room, immediately after delivery. Advantages of PPIUCD and complications were explained. Pretested questionnaire were filled to know acceptance and rejection.

*Procedure of Insertion of PPIUCD*

- *Post Placental*

After obtaining written consent form from the patients ready for PPIUCD, Copper T 380A was inserted after 3<sup>rd</sup> stage of labour management that is after placental removal. IUCD was inserted cautiously and aseptically into the uterine fundus.

- *Intra Caesarean*

IUCD was inserted directly into uterine fundus after

delivery of placenta and then the uterine incision was closed.

*Follow up*

Follow up was done at 6 weeks in outpatient department. Symptoms and signs of adverse effects due to IUCD insertion were noted like discharge, bleeding and pain abdomen. Patients inspected for threads, if threads were not found then pelvic ultrasound was done. Women who came for follow up and want to remove IUCD, reasons were meticulously filled in the questionnaire.

**Results**

A total 7573 deliveries were conducted during the study period. Out of the total delivered patients, 3911 (51.64%) were medically not fit for insertion of IUCD. Out of the remaining 3662 patients, 953 were counseled and motivated for PPIUCD adoption and the advantage of PPIUCD over other methods of contraception. Out of these 179 patients accepted the method. Acceptance was 18.8% who were counseled and motivated. Overall acceptance was only 4.89%. The patients who refused for PPIUCD were counseled for other methods of contraception.

*Demography*

(Table1) shows the demographic characteristics of the 179 PPIUCD clients. Majority of cases were between the age group of 21-25 years (64.24%) which is statistically significant. Most of the clients were multiparous (52.5%). 65% were literate.

**Table 1:** Demographic characteristic of the patients of PPIUCD

Characteristic	Number of patients	Percentage
<b>Age</b>		
Less than 20	33	18.44%
21-25	115	64.24%
26-30	25	13.97%
More than 30	6	3.35%
Total	179	100%
<b>Parity</b>		
Multiparous	94	52.5%
Primiparous	85	47.5%
Total	179	100.00%
<b>Educational status of the patients</b>		
Illiterate	63	35.01%
Primary	47	26.44%
Secondary	35	19.54%
Higher secondary	29	16.12%
Graduate	4	2.03%
Post graduate	1	0.5%
Total	179	100%

**Table 2:** Mode of delivery

Mode of Delivery	Number of Patients	Percent
LSCS	31	17.3%
FTND	148	82.7%
Total	179	100%

Abbreviations: LSCS Lower segment caesarian segment  
FTND Full term normal delivery

**Table 3:** Follow up and complains/finding of the patients of PPIUCD

Variables	Number of patients	Percentage
<b>Follow up</b>		
Returned for follow up	137	76.54%
Lost to follow up	42	23.46%
<b>Complains on follow up</b>		
Pain	14	10.24%
Bleeding	13	9.48%
<b>Finding</b>		
Missing thread	20	14.59%
Expulsion	8	5.83%
Removal rate	17	12.4%
Continuation rate	112	81.75%

#### Mode of Delivery

Out of 179 patients who were inserted PPIUCD, 148 delivered vaginally and 31 by LSCS (Table 2).

#### Follow up and Complains

42(23.46%) cases were lost during the study. Out of the 137(76.53%) clients who returned for follow up, 28 had undergone LSCS and 109 delivered vaginally. In 8(5.3%) cases IUCD was expelled. On follow up, the common complaints noted were abdominal pain 14 (10.21%), abnormal bleeding per vaginum 13(9.48%) and missing thread 20(14.59%). There was no statistical significant difference found between LSCS and FTND subjects regarding pain and bleeding problems. Missing strings were seen more in LSCS subjects during follow up. Out of the 17 patients who removed IUCD during follow up 16 patients delivered vaginally and 1 delivered by LSCS. 8 patients removed due to pain, 6 due to heavy bleeding and 3 who undergone tubal ligation. Removal rate was 12.4% among the follow up group. PPIUCD also had no effect on lactation (Table 3).

There was no report of perforation during insertion of IUCD or in post partum period. No failure of PPIUCD was reported. No signs of PID were noted in any subjects as all were given antibiotic post insertion.

#### Discussion

PPIUCD seems to be a safe long acting highly

effective, easily accessible, reversible and cost effective contraceptive method for most postpartum women specially lactating women. According to UN 1997, CuT380A confers contraceptive protection similar to that achieved with tubal ligation [5].

In our study total acceptance rate was 18.8% who were counseled and motivated. Patients who refused for PPIUCD had many misconceptions and myths about it like it affects lactation, non reversible method, cause pain, heavy bleeding and hinders during coitus. 64.24% women who accepted PPIUCD as a contraception method belonged to age group of 21-25years. This was probably because they considered PPIUCD as an effective spacing method. Alvarez Peyalo et al (1996) also found that average age of PPIUCD acceptors was 20.6 years [6]. Of concern value is that, about 18.44% women were below or of age 20 years, which shows early marriage before 20 years is still prevalent in India. Only 3.35% women belonged to age group >30 years probably because of higher preference of tubal ligation in this group of subjects who completed their child bearing.

The results of our study showed that 52.5% of total PPIUCD acceptors were having 2 or more children, as they wanted some form of contraception awaiting permanent sterilization. According to Patel and Khan, men approve use of contraceptive only after having 2 or 3 child [7]. Gunjan goswamy ET al., found women with second child were high acceptors (48%) [8] but Mishra S et al., found high acceptance among primiparous women (60.7%) [9].

148 subjects of FTND (82.7%) consented for

PPIUCD as compared to 31 subjects of LSCS (17.3%). Manju shukla et al., found 60.87% accepted PPIUCD after a vaginal delivery [10]. Vidya ramana et al., found 83.73% of the patients who gave consent were people, who had vaginal delivery and 16.26% acceptors were people who underwent caesarian section, which is almost equal to our study [11].

During this study, it is seen that nearly 65% of clients were literate indicating that education is an important factor in awareness and acceptance of PPIUCD which is statistically significant. Education renders people more receptive to new ideas and practices, spacing methods, and importance of small family norms. Education is also a major factor in fertility control. Choudhary et al found secondary and higher education influenced contraceptive use [12]. Ullah and Chakraborty showed women's education as the most important determinant of contraceptive use [13].

In our study 76.53% subjects turned up for follow-up of which 90.32% of the subjects delivered by LSCS and 73.65% of subjects delivered vaginally. The expulsion rate in our study was 5.83% and the removal rate 12.40%. 3 cases removed Cu-T as they were motivated for permanent sterilization (laparoscopic TT) by ASHA worker due to vigorous family planning program running in the state. This shows that these ground level workers can play an important role in motivating people for this method, if they are given proper information, adequate training and motivation in the form of honorarium. Loss of follow up is seen in 23.46% of patients.

The importance of follow up visit after PPIUCD insertions is that women as well as we (health care providers) can be reassured of IUCD placements. In case of expulsion reinsertion or other contraceptive method can be provided

Mishra S et al., found expulsion rate of 6.4% and 23.05% participants were lost to follow up [9]. Anjali et al observed 28% participants were lost to follow up. Major complain at follow up were, 22% had expulsion, 8% had pain abdomen and 6% found menstrual irregularities [4]. Satyavathi et al., found reasons for removal were bleeding (27.27%), menstrual disturbances (18.18%), pressure from family (27.27%) other problems (18.18%) and pain (9%) [14]. Majority studies including current study observed pain and bleeding were the main problems for removal of IUCD.

Out of total women who accepted post-placental IUCD insertion, 81.75% post-placental IUCD's were retained and continued. The reason for expulsion noted in my study could be lack of experience leading to low placement of Cu-T in the uterine cavity,

resulting in more expulsions. Women who had their Cu-T expelled, were motivated for re-insertion of IUCD, those willing were provided reinsertion of copper-T and if unwilling, were advised other suitable contraceptive method.

No cases of uterine perforation or pregnancy with IUCD-in-situ were reported during the study. This is in accordance with the study of El Shafei MM et al (2000) [15] and Ricalde et al (2006) [16] where no perforations were observed in PPIUCD.

During the study it was found that post partum uterine contractions had no effect on the IUCD placement, and thus administration of 10 IU oxytocin as a part of active management of third stage of labour had no interference with PPIUCD placement

#### *Key Message*

PPIUCD is a safe and reversible, immediate method of contraception.

#### **Conclusion**

It is concluded from my study that Post-placental IUCD is an effective method of contraception.

Assuming that women will return later often can leave women with no option at all. Despite the potentially higher expulsion rate for PPIUCDs, the public health benefit of the service must be considered. While the expulsion rate may be as high as 10-15%, this also means that the retention rate is more than 85-90%. In situation of limited access to care and infrequent postpartum care, this level of programmatic achievement can be considered as success. We recommend that this method can be employed for providing birth spacing and reversible contraception.

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