www.jmscr.igmpublication.org
Impact Factor (SJIF): 6.379
Index Copernicus Value: 79.54
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossrefDOI: https://dx.doi.org/10.18535/jmscr/v6i9.31

IGM Publication Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Postpartum IUCD: 2 years Experience at a Tertiary Care Hospital

Authors
Sr. Prof. Dr Bharti Saxena[1], Dr Anjali Jasawat[2]
[1]Sr. Professor, [2]Senior Resident
Department of Obstetrics and Gynecology Government Medical College, J.K. Lon Hospital, Nayapura, Kota
Corresponding Author
Dr Anjali Jasawat
Address:- 5/18 Malviya Nagar, Jaipur 302017, India
Telephone No. 9530005743, Email: *Anjali23.aj@gmail.com*

Abstract
Background: *Sixty five percent women in first year postpartum period have unmet need for family planning, but only 26% are using any contraceptive. Almost 61% of births have average birth to birth interval of less than the recommended 36 months. After the inception of Postpartum IUCD program in 2009; CuT380 A is being provided to women soon after birth in government setting. It has the advantage of being effective, long acting, reversible and safe during breast feeding.*
Method: *Present study was undertaken to assess the rates of acceptance, complications, removal and expulsion at 6 week follow up.*
Results: *Study included 25,076 parturients delivered in the 2 year period out of which 1120 accepted PPIUCD (4.47%). Acceptance rate in vaginal delivery was 38.48% (28.40% post placental & 10.08% Immediate postpartum) and 61.52 in Intra caesarian insertion. Amongst acceptors 30.44% were primipara and 69.55% were multipara. 38.31% reported for follow up, 7.68% contacted on phone and 54.01% were lost to follow up. Out of total 515 (45.99%) patients who were followed up: 85.44% had no complaints 6.99% had irregular bleeding PV, 4.66% had pain abdomen, 1.16 had vaginal discharge, 1.74% had missing threads. Removal rate at 6 weeks was 9.19% and continuation rate 89.73%. Out of 103 removals maximum (34.95%) were for irregular bleeding followed by social reasons 24.27%. There was no case of perforation.*
Conclusion: *PPIUCD is effective and safe contraception option for Indian Women. Better counseling may result in lesser removals and higher continuation rates.*
Keywords: *PPIUCD, Cotraception, CuT380 A.*

Introduction

India shares 2.4% of world's landmass but is home to 17.5% of global population. Census 2011 reveals a high population density in India (382/sq km) as compared to average population density of the world (46/ sq km) high annual growth rate (1.64%) as compared to average annual growth rate of the world (1.23%)[1].

Although India was the first country in the world to launch a national Family planning programme in 1952; we are still far from achieving our goal.
Short intervals between births are linked with higher maternal and perinatal mortality and morbidity[2]. In india, the 2005-2006 National Health Survey reported that 61% of births were spaced less than 3 Years[3,4,5.]

Almost 65% of women in the first year postpartum had an unmet need for family planning but only 26% are using any contraceptive[6,7].

The government of India aims at achieving the MDG of improved maternal and child health by providing quality contraception services to women so that unwanted pregnancies are prevented. Provision of PPIUCD (CuT 380 A approved and provided free of cost in govt. institution) in the immediate postpartum period is best suited for the women who are not likely to return to the health facility after child birth. It is safe, effective, private, long acting, coitus independent rapidly reversible and cost effective contraceptive[4].

Since the inception of Janani Suraksha Yojana (JSY) in 2005 facility based birth have increased. PPIUCD services were introduced in 2009 in a phased manner in order to utilize this opportunity and provide contraception at the time of delivery because the woman may not return later on for this purpose.

We present here our experience with PPIUCD in terms of Acceptability, Safety, Expulsion and removal rates at 6 weeks follow up.

Aims and Objectives

1. Evaluation of Acceptability of PPIUCD among woman admitted at our hospital for delivery.
2. Assess Safety & Efficiency of PPIUCD inserted post placentally and immediate postpartum in vaginal delivery and intracaesarian.
3. Expulsion, Removal and Continuation rates at 6 weeks follow up.

Material and Methods

Study Design: This is an open label prospective study to assess acceptance and evaluate safety, efficacy and expulsion rates at 6 weeks follow up.

Study Setting: Study participants were women admitted for delivery to labour room of our tertiary care institution. They were counseled in first stage and immediate postpartum. Those who were booked had received counseling in Antenatal clinic also.

Study Period: 1st June 2015-30th June 2017. Contraception counseling is given to all women attending ANC as well as all women admitted to labour room for delivery. Those who were willing and gave written consent were enrolled into the study if they fulfilled the Inclusion criteria i.e. Maternal age 18-45 year and gestational age >36 weeks for uniformity amongst participants.

Exclusion criteria were -

(i) Hemoglobin <8gm%
(ii) Cases handled by Dai
(iii) Temperature ≥38^{0}C during / after delivery / Chorioamnionitis
(iv) Rupture of membranes ≥18hours before delivery
(v) Unresolved PPH
(vi) Tumors/Congenital anomalies of the genital tract

Women were counseled in first stage of labour as well as immediately after delivery. Insertion of PPIUCD was done:

(i) Post placentally: Within 10 min of expulsion of the placenta
(ii) Immediate postpartum: Within 48 hours after vaginal delivery.
(iii) Intracaesarian: After delivery of placenta and before uterine wound closure

Standard guidelines were followed according to the Postpartum IUCD Reference Manual (November 2010) issued by the Family planning division, Ministry of Health and Family Welfare, Government of India, for the purpose of counseling, Insertion technique and Infection prevention. Post procedure counseling included advice to come for follow up at 6 weeks or earlier if any problem.

At the follow up visit: Complaints if any were noted. Any questions she had were answered. Complete local examination was done (Per speculum for the presence of CuT threads, Per vaginal for any associated complaints). In case of

missing threads patient enquired for observing spontaneous expulsion. If needed USG pelvis done to confirm position of IUCD). Those who requested for removal were again counseled regarding advantages of PPIUCD and if still not willing to continue than the reason for removal noted and they were counseled for other methods of contraception after removal. Those who did not come for follow up were phoned up. Some of them came late and some were lost to follow up.

To calculated acceptance rate all women admitted for delivery were included in the study. Safety was assessed on the basis of patients' complaints with request to excess bleeding per vaginum, pain abdomen, abnormal vaginal discharge. Spontaneous expulsion was confirmed by USG.

Observation & Result

Table 1: Total number of IUCD insertion in postpartum period

Types of Delivery	Number (%)	Number of PPIUCD Acceptor (%)	Acceptance (%)
Vaginal	15,467 (61.68%)	431 (38.48%)	2.79%
Caesarean	9,609 (38.32%)	689 (61.52%)	7.17%
Total	25,076 (100%)	1120 (100%)	4.47%

Acceptance rate for PPIUCD was 4.47% (almost double off May 2013 to M ay 2015 2.29%). Acceptance rate in vaginal delivery was 2.79% (previously 2.61%) and in caesarean deliveries was 7.17% (earlier 3.55%).

Table 2: Acceptance of PPIUCD according to parity and timing of insertion

Time of insertion	Primi (%)	Multi (%)	Total (%)
Postplacental	185 (54.25%)	362 (46.47%)	318 (28.40%)
Within 48 hours	31 (9.1%)	82 (10.53%)	113 (10.08%)
Intra-caesarean I	125(36.65%)	335 (43%)	689 (61.52%)
Total	341(100%)	779(100%)	1120 (100%)

In our study acceptance of PPIUCD was more in caesarean deliveries than vaginal deliveries.

Table 3 Distribution of clients according to follow up at 6 week

Follow up	Number	Percentage(%)
Scheduled	429	38.31
Contacted through phone	86	7.68
Lost to follow up	605	54.01
Total	1120	100

Table 4: Distribution of clients according to follow up complaints

Follow up complains	Number	Percentage (%)
No complains	440	85.44
Menstrual irregularity	36	3.21
Pain abdomen	24	2.14
Vaginal discharge	6	0.53
Missing threads	9	0.80
Perforation	0	0.00
Expulsion rate	12	1.52
Failure rate	1	0.08

5 cases had partial expulsion which were removed in OPD.

Table 5: Distribution of clients on the basis of removal of IUCD

Removal of IUCD	Number	Percentage (%)
OPD	78	6.96
OT	25	2.23
Total	103/1120	9.19

1005(89.73%) women still continuing with IUCD.

Table 6 : Causes of removal of IUCD

Causes of removal	Number	Percentage (%)
Persistence bleeding	36	3.21
Pain abdomen	24	2.14
Discharge PV	6	0.53
Social	25	2.23
Pelvic infection	1	0.o8
Failure	1	0.08
Partial expulsion	5	0.45
Missing strings	5	0.45

In present study acceptance of PPIUCD is low probably because counseling was done mainly at admission and post partum period. Since there was no counsel or in our institution hence ANC counseling was inadequate due to heavy patient load in ANC, shortage of staff.

There was no case of uterine perforation.

Discussion

In our study, total of 25,076 women were counseled 1120(4.47%) accepted PPIUCD as a contraceptive method.

Acceptance rate in vaginal delivery was 2.79% and in caesarean deliveries was 7.17%. In the study of Sudha T. R. Banapurmath et al (july 2014) the acceptability of intracaesarian placement of IUCD was highest followed by post placental IUCD insertion[5].

PPIUCD acceptance rate is higher among multipara 779(69.55%) as compared to Primi 341 (30.45%) contrary to study done by *Mishra Sujnanendra (Oct 2014)* where acceptance of

PPIUCD was the most common among primigravida clients (20.73 %) and in multiparous[6], it was 13.76 %; but similar to the study by Grimes et al.[7] where they found higher acceptance in multiparous clients (65.1 %). Lara Ricalde R *et. al. has reported an acceptance rate of 28.9%*[8]

Of vaginal deliveries, 318 (28.40%) accepted PPIUCD postplacentally, which comprised of 185 (54.25%) primi & 362 (46.47%) multipara clients.

In 113 (10.08%) clients of vaginal deliveries PPIUCD was inserted within 48 hours of delivery.

Of 689 (61.52%) intra-caesarean acceptors, 125(36.65%) were primi & 335 (43%) were multipara.

In our study, 429(38.31%) reported for follow up on scheduled time. 86 (7.68%) clients were contacted through phone. 605 (54.01%) lost to follow up. In study of *Mishra Sujnanendra 2014*,only 59.98 % visited clinic, another 18.97 % were followed up over phone. And as many as 23.05 % were lost to follow up[6]. *In* the study of Sudha T. R. Banapurmath et al(july 2014) rate of return for follow-up visit were 94%[5].

Out of 515(45.98%) clients who were followed up, 440(85.44%) had no complaints and were continuing PPIUCD comfortably, 36(3.21%) women came with complain of menstrual irregularities or excess bleeding per vaginum, 24(2.14%) had complain of pain abdomen, 6(0.53%) clients reported with complain of vaginal discharge, 9(0.80%) clients had complain of missing thread. No case of perforation was seen. Lara Ricalde R *et. al., observed no infection among clients*[8].*In* the study of Sudha T. R. Banapurmath et al(july 2014) rate of return for follow-up visit were 94%(5). In the study of Sushila kharkwal et al (2015) bleeding per vaginum was the most common reason behind the removal of PPIUCD accounted for 37.5%.Second most common reason was missing strings in 25% females. Other reasons were infection, expulsion and pelvic pain together accounted for 37.5%[9]. Similar results were found in study done by Rukiya Abdulwahab Mwinyi Ali (2012), expulsion rates of the immediate PPIUCD was 6.4%.pelvic infection 3.2% and lost strings were 5.3%[10]. Expulsion rate was 10.5% in the study of Katheit G et al (2013)[11].

USG was required in 9 clients for confirmation of IUCD position. 12 clients gave history of spontaneous expulsion of IUCD.

Hence expulsion rate was found to be 1.52%. Contrary to the study of *Mishra Sujnanendra*, expulsion rates of the immediate PPIUCD were 6.4 %[6], multi country study done in Belgium, Chile, and Philippines which showed the rate of expulsion at 1 month ranging from 4.6 to 16.0 %. . Lara Ricalde R *et. al* gave expulsion rates 10.4%, removal rates for bleeding and pain were 4.9[8]

Failure rate: 1(0.08%)case of pregnancy with PPIUCD seen.

103(9.19%) women had CuT removal done. Out of them, 78 (6.96%) clients get removal done in OPD, in 25(2.23%) females removal was very difficult thus removal done in OT under anaesthesia. Thiersh *et. al. reported* 7% removal within the first 6 weeks of insertion due to bleeding and abdominal pain[12].In the study of Sudha T. R. Banapurmath et al(july 2014)0.76% were removed for non medical reasons, and 98.90% IUCD were retained at 14 weeks follow up[5].

But 1005(89.73%) women still continuing with IUCD, similar to the study of Sudha T. R. Banapurmath et al (July 2014) Continuation rates 87.6%[5]. Thiersh *et. al. reported that there were no pregnancies and use continuation was 77%*[12].

Major cause of removal of PPIUCD in our study was persistence bleeding PV 36(3.21%) followed by pain abdomen 24(2.14%), discharge PV 6(0.53%), partial expulsion and missing strings contributes same 5(0.45%), 25(2.23%) women got PPIUCD removal done due to social fear. In a study done by *Mishra Sujnanendra in 2014*, Husband and other family member's pressure for IUCD removal was a significant reason (23.26 %) for removal next to bleeding (33.88 %), these findings emphasize the importance of involving

the husband in prenatal counseling[5]. Lara Ricalde R *et. al., showed* removal rates for bleeding and pain were 4.9 and 4.8 respectively, for non medical reasons were 7.7 for the CuT 380A by 10 weeks. There were no pregnancies, nor uterine perforation[8].

Conclusion

Overall PPIUCD insertion is an effective, useful, safe, & convenient opportunity which should not be missed in countries like ours with high rates of unplanned & short interval pregnancies in women with limited exposure to health care providers. Improvement of counseling in ANC may result in better acceptance of PPIUCD. It should be part of a maternal/newborn/reproductive health package. Longer follow up of clients is needed to assess actual continuation rate, failure rate, and thereby the efficacy method.

Source of Support – Nil

Bibliography

1. Govt. of India (2012). Census 2011, Provisional Population Report Office of the Registrar General and Census Commissioner India, Ministry of Home Affairs, March 31st, 2011.
2. 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.(Pubmed)
3. 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/SR/28.pdf on march 14, 2013.
4. Hostynek JJ; Maibach HI. Copper hypersensitivity: dermatologic aspects. Dermatol Ther 2004;17(4):328-33
5. Postpartum IUCD reference manual by MOHFW, govt. of India, 2010.
6. 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. on march 14, 2013.
7. USAID/ACCESS, India, 2009