

COMPARATIVE STUDY OF EARLY POSTPARTUM IUCD INSERTION TO INTERVAL IUCD INSERTION

Shibani Devi¹, Gurcharan Kaur²

¹Senior Resident, Department of Obstetrics & Gynaecology, Kasturba Hospital, Delhi.

²HOD, Department of Obstetrics & Gynaecology, Kasturba Hospital, Delhi.

ABSTRACT

INTRODUCTION

According to National Family Health Survey-3, Indian women have 13% unmet need for contraception and according to District Level Household & Facility Survey-3, it is 21.3% in the postpartum period. Postpartum intrauterine contraceptive device insertion - both immediately post-placental delivery and somewhat later, but within 48 hours after delivery are options which merit consideration as the woman is likely to have a high motivation for accepting contraception and the healthcare centre provides a convenient setting for insertion of IUCD.

AIM

Comparison of efficacy and complications of IUCD insertions in post-placental with interval period: 6-month followup.

METHOD

This perspective study was conducted among 100 women: - 50 women had IUCD inserted within 10 minutes of placental delivery and 50 had insertion more than 6 weeks after delivery. They were followed till 6 months post insertion and were compared regarding early and late complications, continuation rates and expulsion rates.

RESULT

At the end of six months, we found higher occurrence of lower abdominal pain, heavy menstrual bleeding in case of interval insertion as compared to post-placental insertion which was statistically significant (p value-0.04 & 0.007 respectively). However, the expulsion rates of post-placental IUCD were somewhat elevated (14%) compared to interval insertions (2%). Continuation rates at the end of 6 months in both the groups were 82% and 86% respectively which is comparable.

CONCLUSION

Post-placental IUCD is thus found to be an ideal method to meet the unmet need of postpartum women as it is easily accessible and convenient for both women and their health care providers, is associated with less discomfort and fewer side effects and allow women to obtain safe, long acting, highly effective contraception while still in the health care system.

KEYWORDS

IUCD, PPIUCD, Complication, Expulsion, Continuation.

HOW TO CITE THIS ARTICLE: Devi S, Kaur G. Comparative study of early postpartum IUCD insertion to interval IUCD insertion. *J. Evid. Based Med. Healthc.* 2016; 3(57), 2997-3000. DOI: 10.18410/jebmh/2016/653

INTRODUCTION: An IUCD is the most frequently used reversible family planning method in the world.¹ It can be inserted at any time during the menstrual cycle, within the first 48 hours postpartum – including vaginal delivery as well as caesarean section or 6 weeks after vaginal delivery or directly following an induced abortion or miscarriage.² Breastfeeding women experienced less pain during IUD insertion, and higher continuation rates than non-breastfeeding women even if there was a somewhat higher risk of perforation.³ Women are highly motivated and receptive to Family Planning methods postpartum. Indeed it is at this time that women can most easily discuss and access contraceptive measures.

Financial or Other, Competing Interest: None.
Submission 14-06-2016, Peer Review 22-06-2016,
Acceptance 05-07-2016, Published 18-07-2016.

Corresponding Author:

Dr. Shibani Devi,
#91-D, Pocket-F, GTB Enclave,
Dilshad Garden, Delhi-110093.
E-mail: shibun22@gmail.com
DOI: 10.18410/jebmh/2016/653

According to the USAID/ACCESS 2009 survey, in India, 65% women in the first year postpartum have an unmet need for Family Planning. Only 26% were, however, using any method of contraception during the first postpartum year. 8% of women desire to have another child within the next 2 years after giving birth and are vulnerable to the risks of early pregnancy.⁴ The lactational amenorrhea method of contraception cannot be depended on for longer than 6 months postpartum and even then there is a failure rate of 2% in these 6 months.⁵ Thus postpartum IUD is the need of the hour.

METHODS: This prospective study was conducted in Department of Obstetrics & Gynaecology, Kasturba Hospital, Delhi between January 2013 and February 2014 after getting clearance from ethical committee. After informed consent from those patients who met the eligibility criteria, 50 patients in each groups were selected for the study.

Group A: Post-placental-insertion within 10 minutes of delivery of placenta following normal vaginal delivery.

Group B: Interval-insertion after 6 weeks of normal vaginal delivery.

Inclusion Criteria:

1. Women >18 years of age.
2. Desires to use IUCD as contraceptive.
3. Able and willing to give consent for participation in study and subsequent followups.

Exclusion Criteria:

A. For postpartum cases:

1. Intrapartum or postpartum haemorrhage that continues after complete expulsion of placenta.
2. Membranes ruptured >18 hours prior to delivery.
3. Haemoglobin <10 g%.
4. Chorioamnionitis.
5. Instrumental vaginal delivery.

B. For interval cases:

1. Pregnancy.
2. Congenital malformation of uterus.
3. Any bleeding disorder or unknown cause of vaginal bleeding.
4. Pelvic inflammatory disease.

In group-A IUCD was introduced with help of Kelly’s forceps within 10 minutes of delivery of placenta. In group-B, IUCD was introduced using ‘No touch technique’. They were asked to return immediately in case of excessive pain, heavy bleeding, foul smelling discharge, fever with chills, delayed period, any doubt of expulsion or any problem. They were asked to follow up after 1 week, one month and then after six months. In every visit, pelvic examination was done to look for any abnormality. The immediate and late complications, expulsion and continuation rates were compared in the two groups. Statistical evaluation was done using SPSS. Statistical tests used were- Independent samples t-test, χ -square test, & Pearson correlation.

RESULTS: Comparison of immediate complications between group-A & group-B in our study were given in table 1.

Immediate complication	Group-A N=50	Group-B N=50
Difficulty in insertion	1(2%)	7(14%)
Cramps	8(16%)	14(28%)
Syncope	0	0
Perforation	0	0

Table 1

When all the patients were reviewed at the end of one month, late complications, removal, expulsion & continuation rates noticed in our study were shown in table 2.

At end of 1 month	Group-A N=50	Group-B N=50
Lower abdominal pain	2(4%)	8(16%)
Excessive bleeding	1(2%)	7(14%)
Pelvic Infection (Vaginitis or cervicitis)	0	2(4%)
Missing thread	2(4%)	0
Long thread	4(8%)	1(2%)
Pregnancy	0	0
Perforation	0	0
Others(UTI)	1(2%)	4(8%)
Removal rate	1(2%)	3(6%)
Expulsion rate	6(12%)	1(2%)
Continuation rate	43(86%)	46(92%)

Table 2

Between one to six months period, table no.3 shows the following complications, removal, expulsion and continuation rates in both the groups:

Between 1 to 6 months	Group-A N=43	Group-B N=46
Lower abdominal pain	3(7%)	6(13%)
Excessive bleeding	1(2.3%)	5(10.9%)
Pelvic Infection(vaginitis or cervicitis)	3(7%)	6(13%)
Missing thread	0	2(4.3%)
Long thread	7(16.2%)	1(2.2%)
Pregnancy	0	0
Perforation	0	0
Other(UTI)	1(2.3%)	3(6.5%)
Removal rate	1(2.3%)	3(6.5%)
Expulsion rate	1(2.3%)	0
Continuation rate	41(95.3%)	43(93.5%)

Table 3

At the end of 6 months, late complications, removal, expulsion and continuation rates were compared between the two groups in table 4 below.

At the end of 6 months	Group-A N=50	Group-B N=50	p-value
Lower abdominal pain	5(10%)	14(28%)	0.04
Excessive bleeding	2(4%)	12(24%)	0.007
Pelvic Infection (Vaginitis or cervicitis)	3(6%)	8(16%)	0.19
Missing thread	2(4%)	2(4%)	-
Long thread	11(22%)	2(4%)	0.014
Pregnancy	0	0	-
Perforation	0	0	-
Others(UTI)	2(4%)	7(14%)	0.16
Removal rate	2(4%)	6(12%)	0.27
Expulsion rate	7(14%)	1(2%)	0.059
Continuation rate	41(82%)	43(86%)	0.78

Table 4

Graphical representation of comparisons of major complications and removal, expulsion, continuation rate at

the end of six months between group-A and group-B was given in figure 1.

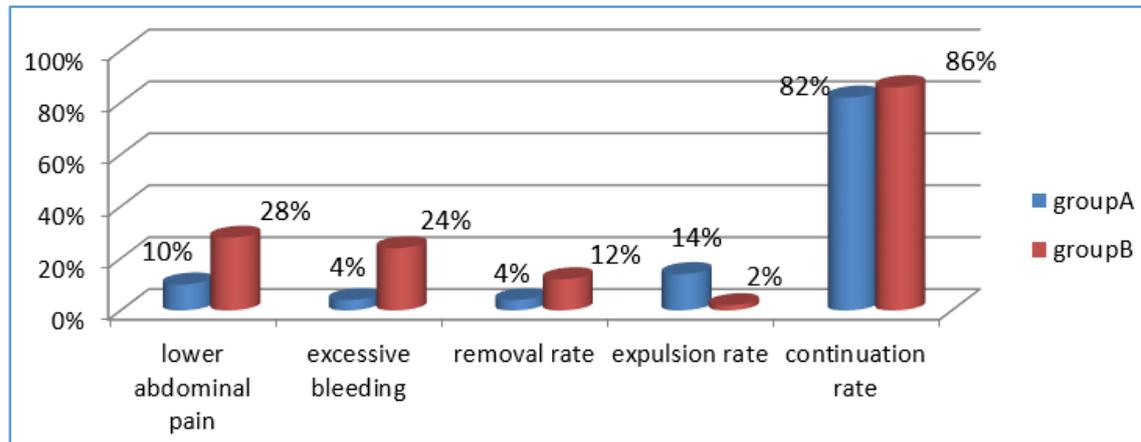


Figure 1

DISCUSSION: IUCD insertion during the postpartum period should be discussed as a contraception option with women as it is easily accessible and convenient for both women and their health care providers and also it is associated with less discomfort and fewer side effects and allows women to obtain safe, long acting, highly effective contraception while still in the health care system. Women during this period are highly motivated and receptive to accept Family Planning methods during the postpartum period.

Among immediate complications, Chen (2010)⁶ reported difficulty in insertion in 1.96% and post-insertion cramps in 20% in the post-placental period which corresponds to our study (2% and 16%). Kittur S (2012)⁷ noted difficulty in insertion in 0.48% in post-placental group. Chen (2010)⁶ found none of the subjects in interval group had difficulty in insertion or cramps. We found slightly higher rate of difficulty in the interval group as compared to post-placental group (14% vs. 2%).

At the end of 1 month, Celen (2004) found minimal complications such as irregular bleeding, uterine cramps were negligible in post-placental group⁸ similar to our study. Kittur S (2012)⁷ noted excessive bleeding in 6.2% cases of post-placental insertion. Eroglu (2006) found that the incidence of excess bleeding was 1.2% in post-placental group and 2.2% in the interval group⁹. We found higher rate of lower abdominal pain and heavy menstrual bleeding in group B as compared to group A (16% & 14% vs. 4% & 2%). We observed no cases of infection similar to Eroglu (2006)⁹ and Celen (2004)⁸ in post-placental group, but Chen (2010)⁶ reported 2% of the patients in the post-placental group had infections at 6-8 weeks post-delivery, which is slightly higher than our study. Eroglu (2006) reported missing strings in 1.2% in post-placental which is similar (4%) to our study.⁹ Intrauterine location of IUDs were confirmed by ultrasound scan in case of missing strings in our study and those patients were counselled properly and reassured about the location of Cu-T and cause of missing strings were explained as curling of strings high in the endocervical canal or displacement by the involuting uterus

to them. Celen (2004) observed no perforation which agreed with our study.⁸ While our study reported no pregnancy, Eroglu (2006) reported pregnancies in 4.7% in the delayed insertion group and none in the post-placental group.⁹

The main reason for removal of Cu-T was excessive bleeding; 2% in group A and 6% in group-B had asked for removal in our study. Celen (2004)⁸ reported that removal for bleeding and pain at six weeks was 0.3% and for other medical reasons was 0.1% in post-placental insertions which is lower than our study. Kittur S (2012)⁷ noted 5.23% of post-placental insertion groups had complete IUCD expulsion at the end of 6 weeks. Eroglu (2006)⁹ reported 11% complete expulsion in post-placental group and 3.6% in interval group comparable to our study (12% vs 2%). At the end of 1 month Chen (2010)⁶ reported continuation rate in post-placental group 84.2% comparable to our study (86%).

Between one to six months, Eroglu (2006)⁹ noted no cases of excessive bleeding in postpartum insertion group and 1.6% in interval group whereas we had 2.3% cases in group-A and 10.9% in group-B. Missing strings were seen in 3.3% in post-placental group which was higher than our study and 4.2% in delayed insertion group which corresponded with our result. In studies conducted by Celen (2004)⁸, Chen (2010)⁶ and Beltagy (2011)¹⁰ no serious complications such as perforation was noted in these women. While no pregnancy was reported in our study, Celen (2004)⁸ reported 0.2% and Eroglu (2006)⁹ reported 1.6% pregnancy in post-placental group. Celen (2004)⁸ reported that removals for pain and bleeding were 2.8% after post-placental insertions which corresponds well (2.3%) with our study.

At the end of 6 months, Welkovich (2001)¹¹ concluded direct post-placental insertion to be a convenient approach with no observed increase in the incidence of excessive bleeding and endometritis. We found statistically significant difference in occurrence of lower abdominal pain (10% vs. 28%) and heavy menstrual bleeding (4% vs. 24%) between group-A and group-B. Neha (2015)¹² reported 5.8% cases of excessive bleeding in post-placental group as compared

to 18.2% in interval group. Morrison (1996)¹³ found infections in <2% patients in their study on IUD insertion within 48 hours of delivery in Africa which was much lower than in our study. Neha (2015)¹² observed no cases of pelvic infection in post-placental group and 4.5% cases in interval group which is much lower as observed in our study (6% vs. 16%). No perforations were noticed in our study which agreed with those of Morrison (1996)¹² and Eroglu (2006).⁹ None of the women got pregnant in our study with an observation period of 6 months while Celen (2004)⁸ observed intrauterine pregnancies in 0.75% patients with post-placental insertions at the end of one year. Celen (2004)⁸ observed that in post-placental group, removals for bleeding and pain were 3.1% in the first year after insertion which matched with our study (4%). According to Menon (2007),¹⁴ the commonest reason for removal was bleeding. The increased expulsion rates of postpartum placed IUCDs are thought to be due to large uterine volume, thus it may not retain an IUCD as efficiently as a smaller sized uterus, the still partially dilated cervix and the continuous flow of lochia in the early days of puerperium. Eroglu (2006)⁹ had mentioned cumulative expulsion rate of 14.3% in post-placental group and 3.8% in interval group comparable to our study (14% vs. 2%).

Similarly, Chen (2010)⁶ reported 24% in post-placental vs. 4.4% in the interval group. Continuation rate at the end of six months in group-A was observed to be 82% comparable to that of Eroglu et al (83.2%)⁹ and Celen et.al (87.6%).⁸

CONCLUSION: Thus, the insertion of an IUD immediately after placental delivery was demonstrably safe, having no reported incidence of perforation with low rate of expulsion, pelvic infection, lost strings and high rate of continuation at the end of 6 months of followup. These IUD insertions should be considered as choice of postpartum contraception for women with limited access to medical care, as institutional delivery affords a unique opportunity to address the need for contraception.

REFERENCES

1. Intrauterine devices. Technical and managerial guidelines for services. World Health Organization Geneva (1997).
2. Royal college of nursing. Fitting intrauterine devices. Training guidance for nurses. Royal college of nursing 2002;1:3.
3. World Health Organization. Improving access to quality care in family planning: medical eligibility criteria for contraceptive use. WHO, Geneva, Switzerland 2004;81(3);1011-1027.
4. USAID. Family planning for postpartum women: seizing a missed opportunity. Washington DC: USAID 2009.
http://www.usaid.gov/our_work/global_health?mch/mh/techarea/missed_opportunity_brief.html.
5. Labbok MH1, Hight-Laukaran V, Peterson AE, et al. Multicentre study of lactational amenorrhea method: efficacy, duration and implication for clinical application. *Contraception* 1997;55(6):327-336.
6. Chen BA, Hayes JL, Hohmann HL, et al. A randomized trial of post-placental compared to delayed insertion of the levonorgestrel releasing intrauterine device after vaginal delivery. *Obstet and Gynecol* 2010;116(5):1079-1087.
7. Kittur S, Kabadi YM. Enhancing contraceptive usage by PPIUCD insertion with evaluation of safety, efficacy and expulsion. *Int J Reprod Contracept Obstet Gynaecol* 2012;1(1);26-32.
8. Celen S, Moroy P, Sucak A, et al. Clinical outcomes of early post-placental insertion of intrauterine contraceptive devices. *Contraception* 2004;69(4):279-282.
9. Eroglu K, Akkuzu G, Vural G, et al. Comparison of efficacy and complications of IUD insertions in immediate post-placental/early postpartum period with interval period: 1 year followup. *Contraception* 2006;74(5):376-381.
10. Beltagy NS, Darwish EA, Kasem MS, et al. Comparison between copper T 380 IUD and multiloop 375 IUD in early postpartum insertion. *Middle East Fert Soc J* 2011;16(2):143-148.
11. Welkovich S, Costa LO, Faundes A, et al. Post-partum bleeding and infection after post-placental IUD insertion. *Contraception* 2001;63(3):155-158.
12. Neha Jain, Nishat Akhtar. A study to compare efficacy, safety and outcome of immediate postpartum intrauterine contraceptive device with that of delayed insertion. *International Journal of Science & Research* 2015;4(2);1388-1391.
13. Morrison C, Waszak C, Katz K, et al. Clinical outcomes of two early postpartum IUD insertion programs in Africa. *Contraception* 1996;53(1):17-21.
14. Menon K, Moore P, Penfield B. Reasons for IUD/IUS removal. *J Fam Plan and Reprod Health Care* 2007;33(4):287-288.