

A STUDY ON OUTCOME OF POSTPLACENTAL INSERTION OF INTRAUTERINE CONTRACEPTIVE DEVICE AT A TERTIARY CARE CENTRE IN COASTAL ANDHRA PRADESH

Chandrika Kanne¹, Venkateswara Rao Jakamsetti²

¹Assistant Professor, Department of Obstetrics and Gynaecology, GSL Medical College and General Hospital, Rajahmundry,

²Professor, Department of Obstetrics and Gynaecology, GSL Medical College and General Hospital, Rajahmundry.

ABSTRACT

BACKGROUND

In view of high rate of teenage marriages, unintended pregnancies and low rate of birth spacing in this region, there is a need for reliable, effective, long-term contraception such as Intrauterine Contraceptive Device (IUCD) in postpartum women. The present study was planned to evaluate the safety and efficacy of postplacental IUCD insertion in women delivering vaginally or by caesarean section in a tertiary care centre facility in East Godavari District of Coastal Andhra Pradesh.

MATERIALS AND METHODS

The women recruited had Cu-T 380A insertion immediately after delivery of placenta in vaginal or caesarean delivery. The women were followed up at 6 weeks and 6 months after delivery.

RESULTS

A total of 123 women were included in the study. 93.4% women reported for 1st follow up at 6 weeks and 73% women reported for 2nd follow up at the end of 6 months. The cumulative expulsion rate at the end of 6 months was 8.67%. Cases required removals of Cu-T in view of menorrhagia were 4%. There were no cases of misplaced IUCD, PID, perforation of uterus, pain abdomen. However, 4% of women got IUCD removed due to domestic reasons.

CONCLUSION

Although, the expulsion rate for immediate postpartum insertion was higher than for interval insertion, the benefits of providing highly-effective contraception immediately after delivery outweigh this disadvantage particularly in a rural area where women have limited access to medical care.

KEYWORDS

Contraception - Intrauterine Device - Postplacental Insertion - Expulsion.

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BACKGROUND

Postpartum period is one of the critical times when both woman and newborn need a special and integrated package of health services as morbidity and mortality rates are quite high during this period and also the women are vulnerable to unintended pregnancy. In India, 65% of women in the 1st year of postpartum have an unmet need for family planning. Hence, contraception needs to be practiced in this critical period.¹ Initiation of contraception during this period to prevent unintended pregnancy and short birth intervals can avert maternal and child morbidity and mortality. Studies show that pregnancies taking place within 24 months of previous birth have higher risk of maternal

complications like malnourishment, poor weight gain, abortions, premature labour, PPH, maternal death and fatal complications like IUGR, low birth weight and foetal loss.

IUD insertion immediately after delivery has several advantages like the woman is not pregnant and is highly motivated for contraception, does not interfere with breast feeding, is convenient for both women and their healthcare provider is associated with less discomfort and side effects than interval insertion and allows women to obtain safe long-acting, highly-effective contraception while already within medical system.

AIMS AND OBJECTIVES

The study was planned to evaluate the safety and efficacy of postplacental insertion of intrauterine contraceptive device in women delivering vaginally or by caesarean section so as to promote immediate and effective postpartum contraception.

MATERIALS AND METHODS

Immediate postplacental insertion refers to insertion of IUCD within 10-15 minutes of placental delivery after vaginal or caesarean delivery. This prospective study was carried out

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Corresponding Author:

Dr. Chandrika Kanne,

Assistant Professor, Department of Obstetrics and Gynaecology,

GSL Medical College and General Hospital,

Rajanagaram, Rajahmundry-533296,

E-mail: chandrikakanne@yahoo.co.in

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in Department of Obstetrics and Gynaecology, GSL Medical College for a period of 1 year from February 2015-January 2016. Women delivering in the hospital fulfilling the inclusion criteria were included in the study after obtaining informed consent. The study protocol was approved by the College/Hospital Ethical Committee. CU-T 380A was used in this study. Chi-square test was applied for statistical analysis.

Inclusion Criteria

All women delivering vaginally or by caesarean section and willing to participate in the study were counselled for IUCD insertion in prenatal period or in latent phase of labour or after immediate delivery of the baby.

Exclusion Criteria

Women with Hb <8 gms/dL with PROM >18 hrs. prior to delivery, immediate PPH, chorioamnionitis, obstructed labour, distorted uterine cavity by fibroid or by congenital malformations of uterus, women on anticoagulant therapy, women having fever during intrapartum period, women suffering from AIDS or high individual likelihood of exposure to Gonorrhoea or Chlamydia or antenatal history of unresolved acute purulent discharge women having extensive genital trauma.

After selecting the women who fulfilled the eligibility criteria, detailed medical, obstetrical and gynaecological history was taken and complete general physical as well as pelvic examination was done and findings were recorded. The procedure was explained to the women before insertion of IUCD to make her as comfortable as possible. Oxytocin was routinely given after the delivery of infant as a part of active management of third stage of labour.

Methodology

In the study group, CU-T 380A was inserted within 10 minutes of expulsion of placenta in vaginal deliveries taking all aseptic precautions. By means of Sims speculum, post vaginal wall was depressed and anterior lip of cervix was held by ring forceps, CU-T was placed at the fundus using sponge holding forceps by standard technique and fundal placement was ensured. Strings were always seen in the cervix after insertion. In caesarean section, after delivery of the placenta, the CU-T was placed at the fundus by using sponge holding forceps and the threads were placed through internal os into cervix by means of artery forceps.

Safety Analysis

Safety was assessed on the basis of patients' complaints with respect to excess bleeding or foul smelling discharge and if any pain. Complications such as expulsion of IUCD, pelvic infection, displacement and perforation if any were noticed. Follow up schedule was at 6 weeks and at 6 months interval following the delivery, which include examination of vitals, abdomen for suprapubic tenderness and involution of uterus, P/S examination for visualisation of threads and USG TAS.

RESULTS

A total 123 women were included during the study period of 1 year. The women were between 18-32 yrs. of age, out of whom 105 (85.3%) were below 21 yrs. 116 (94.5%) women were primiparous and 7 (5.5%) were 2nd parous. All of them underwent immediate postplacental IUCD insertion. All these women were asked to come for follow up after 6 weeks and 6 months after delivery. Out of 123 women who underwent postplacental insertion of IUCD, eight women were lost for 1st follow up and remaining 115 women who came for 1st follow up, 20 (17.3%) had IUCD insertion during caesarean section and 95 (83.6%) had IUCD inserted vaginally within 10 mins. of delivery of the placenta in vaginal deliveries. Out of 123 women who had IUCD inserted, 115 (93.4%) came for 1st followup visit and 88 (71.54%) came for 2nd follow up. There were 10 cases of spontaneous CU-T380A expulsion and all the 10 women brought the CU-T along with them to the outpatient department within 1 month of insertion. Pelvic ultrasonograms were also done to confirm the same and were advised alternate methods of contraception. No expulsion of CU-T was seen in intra-caesarean insertion cases. All spontaneous expulsions were seen in cases of vaginal deliveries only.

None of the women had complained of pain in the lower abdomen or abnormal discharge per vagina, nor did any of them have any signs of PID on examination. However, 4 (4.4%) women got CU-T removal done due to domestic reasons between 1-5 months postpartum and in another 4 (4.4%) women removal was done due to menorrhagia, which did not respond to tranexamic acid. 2 (2.2%) women got it removed and underwent tubectomy. There was no case of misplaced IUCD. Finally, at the end of 2nd follow up at 6 months, 80 women were continuing with CU-T in situ with nil complaints.

Sl. No.	Complications	Number	Percent	P value
1.	Irregular bleeding/increased duration of bleeding	Nil	Nil	-
2.	Missed thread/displacement	Nil	Nil	-
3.	Infection	Nil	Nil	-
4.	Expulsion	10	8.67	0.00
5.	Uterine perforation	Nil	Nil	-
6.	Removal	2	1.73	Insignificant
7.	Failure	Nil	Nil	-

Table 1. Complication at 6 Weeks After PPIUCD Insertion (N=115)

Table 1 shows that among 115 parturient of PPIUCD insertion, 115 (93.4%) were followed and 8 (6.5%) were lost to follow up. Out of 115 parturient who were followed up after PPIUCD insertion, 10 (8.67%) had spontaneous expulsion of CU-T. There were no cases with any complications as mentioned above. There was no parturient who had uterine perforation. However, one parturient had IUCD removal and underwent puerperal tubectomy on 4th postnatal day and another women got CU-T removal at the end of 4 weeks due to domestic pressure. 103 (89.56%) women were satisfied and had no complaints.

Sl. No.	Complications	Number	Percent	P value
1.	Irregular bleeding/increased duration of bleeding	4	4.54	2.06
2.	Missed threads	1	1.11	-
3.	Infection	Nil	Nil	-
4.	Expulsion	Nil	Nil	-
5.	Uterine perforation	Nil	Nil	-
6.	Removal	4	4.54	2.06
7.	Failure	Nil	Nil	-
Table 2. Complication at 6 Months After PPIUCD Insertion (N=88)				

Table 2 shows that 88 (71.54%) parturient who were followed up after PPIUCD insertion at 6 months. 15 parturient were lost for second follow up. 4 (4.54%) developed bleeding problems in the form of increased duration of bleeding or irregular bleeding. There was 1 case of missed thread and 4 women had removal done (4.54%); out of whom, 1 woman had undergone interval tubectomy and 3 women got IUCD removal done due to domestic reasons. There was no parturient who had uterine perforation.

DISCUSSION

Even though, PPIUCD insertion is practiced all over the world since early 1990s, the institute where the study was conducted started the practice of PPIUCD insertion since 2015 and the main aim of the study is to promote immediate postpartum contraception thereby improving the coverage of postpartum contraception in the rural setup of coastal Andhra Pradesh where most of the women complete their families before they reach 21 yrs. of age view early marriages and the incidence of teenage pregnancies, which are quiet high in these rural areas.

Timing of insertion, counselling and provider training are important factors for IUCD insertion in postpartum period as quoted in United Nations Population Information Network report² as these factors influence the risk of expulsion. The risk of expulsion is higher if inserted after 48 hrs. of delivery.¹ In the present study, IUCD was inserted postplacentally in women delivering by caesarean section or vaginally (within 10 mins. of delivery of placenta). In this study, 10 women had expulsion of IUCD during 1st month of insertion and the cumulative expulsion rate at the end of 6

months was 8.67%. A study conducted in India by Shukla et al reported cumulative expulsion rate at the end of 6 months as 10.67%.³ In one study done by Anjalichari et al, the IUCD expulsion rate in postplacental insertion after vaginal deliveries was 12% and nil expulsion rates in intracaesarean insertion.⁴ In this study, the expulsion rate in postplacental insertion after vaginal deliveries was 8.67% and nil expulsion rate in intracaesarean insertion.⁴

While the expulsion rate may be as high as 8-10%¹ in various studies, this implies that the retention rate is still 90-92%. With good technique, expulsion rate is reduced to <3%. Thus, despite the potentially higher expulsion rates for immediate PPIUCDs, the public health benefit of the service is high in situations of limited access to care and infrequent postpartum care, this level of programmatic achievement can be considered a success.

Expulsion rate of immediate PPIUCD in a study done in China by Chi et al 1994 was 25-37%, while postplacental was 9.5-12.5%. Expulsion of PPIUCD usually occurs in the first few months after insertion. In a multicenter study done by Tatum et al, the expulsion rates of PPIUCD were similar at 1 and 12 months in Belgium (4%) and Chile (7%), while in the Philippines, expulsion increased from 19% at 1 month to 28% at 12 months follow-up.⁵

Out of 88 women who came for 2nd follow up, incidence of menorrhagia in this study was 4.4% and IUCD removal done in all 4 women as they did not respond to tranexamic acid. Incidence of menorrhagia in study done by Shukla et al was 27.23% and removal was done in 6.2% cases. Incidence of menorrhagia in one study done by Satyavathi et al⁶ was 27% at 6 weeks follow up. In this study, the incidence of menorrhagia was nil at the end of 6 weeks follow up. Also, the incidence of menorrhagia in our study was less in comparison to other studies. The incidence of menorrhagia was less in immediate insertion group because there was varying duration of lactational amenorrhoea in the postpartum period. So, longer period is needed to overcome the bias of lactational amenorrhoea.

Our study was comparable with other studies done by Shukla et al, El-Shafei et al, Celen et al, Eroglu et al,^{3,7,8,9} Ei-Shafei et al (2000) found incidence of menorrhagia in 91/1016 clients (9%) in which CuT380A was inserted within 10 mins. at 1 year follow up.⁷ Shukla et al (2000) found 283/1037 (27.3%) clients complaining of menorrhagia in postplacental IUCD insertion.³ Eroglu et al (2006) reported menorrhagia in 2/84 clients in postplacental group and 8/130 in interval/delayed insertion group at 1 year follow up.⁹ Celen et al found negligible incidence of menorrhagia at 1 year follow up.⁸ There was only one case of missing threads in which CU-T was confirmed in place in uterus by means of ultrasound and she was motivated to continue. No case of perforation was reported till the end of study. The possible reason could be thick postpartum uterine wall immediately after delivery and this finding of our study is consistent with other studies conducted by Shukla et al, Kittur S et al and Sevki et al.

Out of the total 123 PPIUCD insertions, 80 (65.4%) women are continuing with IUCD, 10 had removal done due

to various reasons mentioned above and 10 parturient had expulsion of IUCD. Cumulatively, 23 women were lost for follow up. Our study results are consistent with the study done by Nehajain et al¹⁰ in their study continuation rate after 6 months of follow up were 73.4%.

CONCLUSION

The postplacental IUCD insertion appears to be safe and effective method of contraception. The method maybe particularly beneficial in the rural setup where the women are still in their teens and when become pregnant they may require the birth spacing methods as most of the women are poorly nourished and do not have easy access to healthcare system. Therefore, by postplacental IUCD insertion, the women are not only provided the benefit to regain to normal health, but can take complete care of newborn as well as her family. Also, the women need not come regularly for postnatal contraception and counselling. The limitation of this study is the sample size and all the women should be followed for 1 year to comment on failure rate of this technique.

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