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Research Article

Immediate postpartum intrauterine contraceptive device insertion: a prospective follow up study

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ABSTRACT

Background: India's population of over 1.2 billion is slated to overtake China as the world's most populous country, in less than one and a half decade. This population size is more than the population of USA, Brazil, Bangladesh, Pakistan, Indonesia and Japan put together. Family planning is important not only for population stabilization, but it has been increasingly realized that family planning is central to improve maternal and newborn survival and health. Family planning can avert more than 30% of maternal deaths and 10% of child mortality if couples spaced their pregnancies more than 2 years apart (Cleland J et al, 2006). In 1951, India was the world's first nation when Government of India (GoI) launched a family planning programme. Postpartum women who breastfeed their infants can also use Cu IUCD safely, as it does not interfere with breastfeeding. Postpartum IUCD can be inserted immediately after vaginal delivery, during caesarean section and up to 48 hours after birth, before women get discharged from the health facilities. The objectives of this study was The study was conducted to assess the safety, efficacy, and acceptance and follow up of PPIUCD insertion in women delivering vaginally and during caesarean within 48 hours postpartum.

Methods: This prospective study was carried out in a tertiary care hospital, Government Raja Mirasdar hospital, Thanjavur where the number of deliveries per month is more than 1000. The study period was from 01 January 2015 to 30 June 2015 for the period of 6 months. The IUCD was inserted for all the women who fulfill the criteria for PPIUCD insertion. Women with chorioamnionitis, extreme birth canal injuries, unresolved PPH, more than 18 hours from rupture of membranes to delivery of baby were excluded from the study. Clients were counseled during the routine antenatal visits. Post insertion counseling given at 6 weeks and at 6 months during the follow up visits. Clients were advised to come for follow up to assess their satisfaction, acceptance, expulsion rate and complications. During follow up visits per speculum examination done to assess the descent of IUCD strings in to the vagina. USG performed in whom strings were not visible.

Results: A total of 3046 women were included in the study. 1966 Insertions were done after vaginal delivery, 450 insertions done during caesarean and 630 were within 48 hours. The follow up rate at 6 weeks was 70% and 40% at 6 months. There were no complications. The expulsion rate at 6 weeks is 6% and at 6 months is 5%. The removal rate was 5% at 6 weeks and 6% at 6 months. The continuation rates were 90% At 6 weeks and 80% at 6 months.

Conclusions: This study concludes that immediate postpartum insertion is safe and effective. However the expulsion rate for immediate PPIUCD is slightly higher than the interval insertion. Since most women resume sexual activity by 2 to 4 weeks postpartum, in order to avoid the risk of unintended pregnancy immediate postpartum insertion is a good opportunity for the delivering women who are not willing for permanent sterilization and willing for temporary method of contraception.

Keywords: IUCD, Post-placental IUCD, PPIUCD

INTRODUCTION

India's population of over 1.2 billion is slated to overtake China as the world's most populous country and it accommodates more than sixth of the world's population.¹

Indian population is predicted to be beyond 1.53 billion by the end of 2030.² It is essential to control population by easy and effective method.

Institutional deliveries have increased significantly all over the country thereby creating opportunities for easy access to immediate PPIUCD services. The CuT-380A is approved for immediate postpartum services. CuT 380 is highly effective (more than 90% effective). There are 0.6 to 0.8 pregnancies per 100 women in the first year of use. Since parturition is the only period when healthy women comes in contact with healthcare personnel, immediate PPIUCD is approved by ministry of health and family Welfare in order to avoid the risk of unintended pregnancy.

Most women are sexually active by 6 weeks postpartum.³⁻⁵ Immediate postpartum IUCD insertion is approved by WHO, as one of the safe and effective method of temporary contraception.⁶

In the immediate post delivery period the women are highly motivated and need an effective method for contraception so that the child can be brought up with a relaxed mind without the worry of unintended pregnancy. On the other hand, if they are made to wait for 6 weeks for initiating an effective method for contraception, they may conceive accidentally or may not come for contraception.⁷

Other advantages of PPIUCD insertion are that discomfort related to interval insertion can be avoided & the client is highly motivated during the stress of labour. Other 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 the lochia.⁸ Child care is given by the mother with relaxed mental status and without the fear of unintended pregnancy. Taking advantage of the immediate postpartum period for counseling on the family planning and IUCD insertion overcomes multiple barriers to service provision. Saves time as performed on the same delivery table for post placental/intra caesarean insertions. Additional evaluations and separate clinical procedure is not required. Convenience for the clinical staff helps relieve overcrowded outpatient facilities thus allowing more women to be served.

METHODS

This prospective study was carried out in a tertiary care hospital, Government Raja Mirasdar hospital, Thanjavur in the OBGY department for the period from 01 January

2015-30 June 2015. Women were counseled in ANC OPD and labour room and encouraged to opt for post placental IUCD insertion. The inclusion and exclusion criteria were applied and informed consent was obtained.

Inclusion criteria

Inclusion criteria were all women delivering vaginally or by caesarean section, counseled for IUCD insertion in the antenatal period or in labour and willing to participate in the study. Exclusion criteria were women with pre labour rupture of membranes for >18 hours, chorioamnionitis, temperature >38°C during or after labour, continued excessive postpartum bleeding.

The women included in the study underwent immediate postpartum insertion of Copper T 380A after delivery of placenta. The IUCD held by kelleys forceps was introduced in the uterine cavity and placed at the fundus in the women delivering vaginally. In the case of caesarean section, IUCD was placed at the fundus in the uterine cavity through the lower segment incision. Post placental IUCD thread was not pushed into the cervical canal, and care was taken not to include the strings in the suture line. Uterine incision was closed routinely. Women who are not willing immediately after delivery consoled again in the postnatal ward PPIUCD inserted within 48 hours. At the time of discharge from the hospital, women were advised to come for follow-up after 6 weeks and 6 months. At follow up visit, women were asked especially for history of expulsion of IUCD, excessive bleeding, pain or unusual vaginal discharge. Pelvic examination was performed on per speculum examination if IUCD threads were long; they were cut 2 cm from external OS. If threads of IUCD were not seen and there was no history of expulsion of IUCD, pelvic ultrasound was performed for confirmation of IUCD in place. All women who did not return for their 6 weeks and 6 months follow up visit were contacted by phone and reminded about their scheduled visit. For those who still did not come for visit; the follow up information was collected on phone.

During the postpartum period, the women was given a post placental IUCD information leaflet and explained about the follow up at 6 weeks and 6 months or as soon as she notices any warning signs such as

- Foul smelling lochia
- Excessive vaginal bleeding
- Any signs and symptoms of infection such as fever, pain, and myalgia discharge P/V or pain lower abdomen.
- Expulsion of IUCD.

During follow up, detailed history including the menstrual cycles and regarding the warning signs were taken. Physical and pelvic examinations were carried out. Post placental IUCD thread was checked and trimmed. In case post placental IUCD thread was not found on per

speculum examination, ultrasound examination was done to confirm the presence of IUCD and the patient was counseled.

RESULTS

The total number of deliveries during the study period from 01 January 2015-30 June 2015 was 6793. Out of those PPIUCD inserted for 3046 women (44.84%); 85% (n=2596) of PPIUCD insertion were followed by vaginal delivery post placental 64.5% (n=1966) and 20.6% (n=630) insertions were within 48 hours, intra caesarean 14.7 (n= 450). 67.17% (n=2046) were primi para and 32.8% (n=1000) were multiparous.

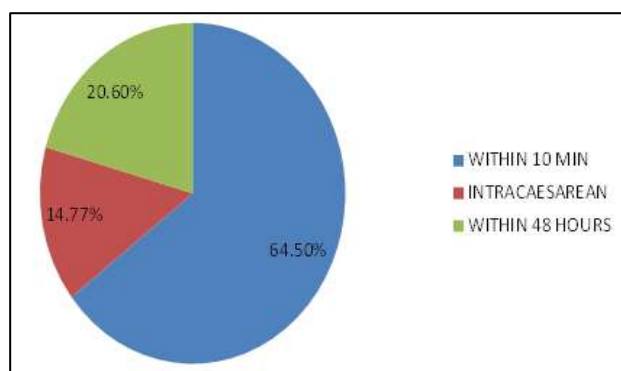


Figure 1: Percentage of insertions within 10 minutes, intra-caesarean and within 48 hours.

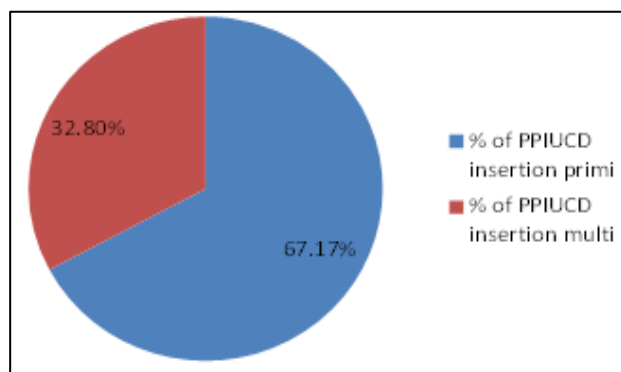


Figure 2: Percentage of PPIUCD insertion in primi and multi.

Table 1: Clinical outcome of PPIUCD insertion.

	6 weeks n (%)	6 months (%)	P value
Expulsion	200 (6.5%)	180 (5.9%)	<0.01
Missing threads	150 (4.9%)	110 (3.6%)	<0.01
Removal	100 (3.2%)		
Pain	50 (1.6%)	45 (1.4%)	<0.01
Menorrhagia	44 (1.4%)	20 (0.6%)	<0.01
Failure	0	0	
Continuation rate	2846 (93%)	2736 (89%)	>0.01

DISCUSSION

During postpartum period women are highly motivated for contraceptive usage.^{9,10}

Immediate post-partum insertion of IUDs appeared safe and effective. Advantages: high motivation, assurance that the woman is not pregnant, and convenience.¹¹ Ultrasound examination of the women who had intra caesarean insertion revealed that all of them had IUCD in situ, similar to other studies.¹² Significantly higher number in Caesarean group was related to coiling of IUCD tail above the tighter cervix. Few contra-verses indicate to methods. Expulsion rates appear to be higher than with interval insertion. Early follow-up may be important in identifying spontaneous IUCD expulsion. Retro placental IUCD is a long term use reversible contraception for liberal usage in the immediate postpartum period.

The NRHM recommends the use of Kelly's forceps for post placental IUCD insertion. In our hospital we routinely use Kelly's forceps for immediate post placental and within 48 hours insertion. In intra caesarean it is directly kept in cavity of uterus in the fundus. Like other studies No case of perforation, PID, or failure of contraception in our study.^{12,13}

The expulsion rate in our study is 6.5% (n=200) at 6 weeks and 5.9% (n=180) at 6 months and it is consistent with other studies.¹⁴ Missing threads noticed in 150 (4.9%) and 110 (3.6%) were found to be intra caesarean insertion. There were no failure in our study. 100 (3.2%) 50 women came for removal at 6 weeks due to missing strings and 50 (1.6%) among them opted for permanent sterilization. No cases of PID reported in our study. Continuation rate was 93% at 6 weeks and 89% at 6 months which is higher in our study when compared to other studies.¹⁵

CONCLUSION

In our study we conclude post-partum insertion of IUDs appeared safe and effective. Clients are subjected to high motivation, assurance that the woman is not pregnant, and convenience. Few contraindications to method. Expulsion rates appear to be higher than with interval insertion. The accepted expulsion rate is 3-37%. But in our study it is only 6%. Good technique of insertion reduces expulsion rate to this range.

Early follow-up may be important in identifying spontaneous IUD expulsion. It is ideal to recommend immediate PPIUCD insertions in all the eligible parturient that opt for temporary contraception. Our study is of larger size with 3046 clients with negligible complications except for missing thread and expulsion. We conclude that immediate PPIUCD is a simple, safe effective method to avoid the risk of unintended pregnancy.

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