Scholars Academic Journal of Biosciences (SAJB) **ISSN 2321-6883 (Online)**
Sch. Acad. J. Biosci., 2017; 5(5):330-333 **ISSN 2347-9515 (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI : 10.36347/sajb.2017.v05i05.001

Original Research Article

Evaluation of Various Clinical Outcomes of Immediate Post placental Intrauterine Contraceptive Device Insertion

Dr. Charu Lata Bansal[1], Dr. Veena Meena[2], Dr. Ankit Kayal[3]
[1]Assistant Professor, Obst & Gynae Department, SMS Medical College, Jaipur
[2]Senior Resident, Obst & Gynae Department, SMS Medical College, Jaipur
[3]MCH Urology, NRS Medical College, Kolkata

***Corresponding author**
Dr Charu Lata Bansal
Email: medicocharu@yahoo.co.in

Abstract: An intrauterine device (IUD) is an effective form of long acting reversible contraception. In developing countries for women with limited access to medical care, term delivery provides an important opportunity to address the need for contraception the specific advantages of an IUCD placed in the immediate postpartum period includes its easy accessibility, acceptability, safety, convenience and high motivation. The present study was planned to evaluate various outcomes of insertion of immediate post- partum IUD in terms of complications, expulsions, and removal and continuation rates. Three hundred women with term pregnancies delivering vaginally were included in the study. Cu T 380A was inserted using a ring forceps within 10 min of removing the placenta. The participants were examined immediately after Cu T insertion, and then at 6 weeks, 6 months and 1 year. There were no serious complications associated with post placental IUCD insertion. The cumulative rates of expulsion, removal for bleeding/pain were 19 and 6.3 per 100 women per year, respectively. The continuation rate at the end of 1 year was 74.67%. This study suggests that though expulsion rate after immediate post placental IUD insertion within 10 minutes of placental delivery is relatively high, but, otherwise it is a safe and effective form of contraception.
Keywords: Post Placental, Cu T 380A, expulsion, continuation.

INTRODUCTION

An intrauterine device (IUD) is the most frequently used reversible family planning method in the world. It offers safe, effective, and long term reversible form of contraception. Copper bearing IUDs are the most commonly used IUDs Unfortunately, a large number of women who wish to delay or prevent future pregnancies receive little or no information on safe, available, effective contraceptives for immediate postpartum use. For this reason, it is important to ensure that women are counseled and provided with an effective contraceptive method to use, while they are still in the hospital. Post placental insertion is immediate insertion of IUD after expulsion of the placenta, preferably within 10minutes after expulsion.

The specific advantages of an IUCD placed in the immediate postpartum period includes its easy accessibility, acceptability, safety, convenience , high motivation, minimal risk of uterine perforation , reduced perception of bleeding and cramping , no interference with breast feeding. Despite the many advantages of PPIUCD, it generally suffers from unpopularity in India because of the anticipated fear of untoward outcomes during postpartum period like excessive bleeding, pelvic inflammatory disease (PID), expulsion of the IUD, perforation of the uterus. Therefore, the present study was planned to evaluate the complications, expulsion and continuation rates of insertion of immediate post- partum IUD in women delivering vaginally.

MATERIALS AND METHODS

This study was conducted in a tertiary care hospital. Pregnant women who delivered vaginally were recruited for IUD insertion immediately within 10 minutes following removal of the placenta. Total 300 patients were included for this study.

Inclusion criterias for recruitment into the study were:

- Women > 18 years of age falling in any of the above category,
- Desires to use Copper T 380 A as contraceptive,
- Able and willing to give consent for participation in study and subsequent follow ups.

Cases with the following findings were excluded for the insertion of Copper T 380A:

- Intra partum or post-partum hemorrhage that continues after complete expulsion of placenta,
- Membranes ruptured for more than 24 hours prior to delivery,
- Chorioamnionitis,
- Congenital malformation of uterus,
- any bleeding disorder,
- History of fever or foul smelling discharge, History of pelvic inflammatory disease.

All patients were counseled regarding the side effects and risks, advantages and disadvantages, method reversibility etc. After explaining the whole procedure written consent was taken from all the patients.

.

RESULTS

In our study, Copper T 380A insertion was done in 300 subjects. A total of 300 women were enrolled in the study for post placental Cu T 380 an insertion. All the participants were asked to follow up at 6 weeks, 6 months and thereafter at 1 year in the postpartum period. The mean age of women included in the study was 26.26 years. The socio demographic characteristics of the participants are shown in table 1. None of the patients was lost to follow up during the study. No serious complication associated with IUCD insertion was observed during the study period.

Table 1: Distribution of cases

parameters	number	Percentage (%)
Age in years		
15-19	0	0
20-24	99	33
25-29	131	43.67
30-34	67	22.33
≥35	3	1
Mean Age (26.6)		
Religion		
Hindu	163	54.33
Muslim	137	45.67
Literacy level		
Nil	112	37.33
1-5	34	11.33
6-12	140	46.67
Higher education	14	4.67
No. of living issues		
1	22	7.33
2	170	56.67
≥3	108	36

The various clinical outcomes of post placental Cu T 380A insertion observed at various follow up visits is shown in table 2. Excessive bleeding was seen in 2.67%, 4.49% and 3.42% women at follow up visit of 6weeks, 6months and 1 year.

Table 2: Clinical outcome of post placental Cu T 380A insertion

Clinical outcome	Six weeks(n=300)	Six months (n=256)	One year (n=234)
1 pain	24 (8%)	18 (7.03)	8 (3.42%)
2 excessive bleeding	8 (2.67%)	12(4.49%)	8 (3.42%)
3 infection	0	36(14.06%)	22 (9.40%)
4 missing thread with Cu T in place	14(4.67%)	0	0
5 long thread with Cu T in place	12(4%)	42 (16.40)	8 (3.42%)
6 pregnancy	0	0	0
7 ectopic	0	0	0
8 perforation	0	0	0
9 others eg. UTI	8 (2.67%)	6 (2.34%)	7 (2.99%)
10. removal	7 (2.33%)	7 (2.73%)	5 (2.14%)
11.expulsion	37 (12.33%)	15 (5.86%)	5(2.13%)
12.continuation rate	256 (85.33%)	234 (91.40%)	224 (95.73%)

The cumulative rates of complications at the end of one year are depicted in table 3. No case of uterine perforation was seen in one year period. The cumulative expulsion rate of 19 per 100women at the end of one year was observed in the present study. In addition to the expulsions, Cu T 380A removal was done in 6.33% women for various medical reasons. The cumulative continuation rate observed in this study was 74.67% at the end of 12 months.

Table 3: The cumulative rates of complications at the end of one year

Clinical outcome	One year (n=300)	Percentage (%)
1 pain	50	16.67
2 excessive bleeding	28	9.34
3 infection	58	19.34
4 missing thread with Cu T in place	14	4.67
5 long thread with Cu T in place	62	20.67
6 pregnancy	0	0
7 ectopic	0	0
8 perforation	0	0
9 others eg. UTI	21	7
10. removal	19	6.33
11.expulsion	57	19
12.continuation rate	224	74.67

DISCUSSION

Intrauterine device (IUD) insertion during postpartum period is an ideal method for some 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 than interval insertions and allow women to obtain safe, long acting, highly effective contraception while already in the health care system. Also women are highly motivated and receptive to accept Family Planning methods during the postpartum period.

The common adverse events observed during the follow up period were persistent lower abdominal pain, irregular and excessive bleeding and pelvic infection. Complaints of bleeding problem were reported by 2.67%, 4.49% and 3.42% women at of 6weeks, 6months and 1 year follow up visit**.** Incidence of menorrhagia reported by Ei-Shafei *et al.;* [1] and Shukla *et al.;* [2] was 9% and 27.3% in post placental IUCD insertion respectively. According to Celen [3] incidence of complications such as irregular spotting, menorrhagia and uterine cramps was negligible in post placental group. Similarly, Welkovic [4] studied post-partum bleeding and infection, and found no difference in the incidence of excessive bleeding after post-placental IUD insertion. Incidence of menorrhagia may vary with duration of lactational amenorrhea but lactational status was not analysed in the present study.

Pain abdomen was reported in total of 16.67% of participants in one year period. In most of the women pain was relieved by analgesics. In our study genital infection was observed in 19.34% women at the end of one year which corresponded to a study carried out by WHO in 12 developing countries in which mild pelvic infection was diagnosed in 10% of women who had post puerperal Cu T insertion at 6 weeks (corresponding to our study) and in 18% of the women who had post puerperal insertion at 6 months [5].

Incidence of pelvic infection was found to be ≤2% in the studies conducted by Morrison [6] and Eroglu [7] on postpartum IUD insertion of Cu T 380A, which was much lower than in our study. No patient had any incidence of PID in our study. No Cu T was removed in any of the subjects due to genital infection. According to Celen [3], suspected PID was observed in 2 patients at 6 month after insertion of post placental Cu T. IUD was removed and antibiotic therapy was started in these patients A study conducted in 13 countries studied infection (PID) due to IUD reported similar rate of infection with immediate insertion and interval insertion [8] in our study all women diagnosed with pelvic infection were treated with appropriate antibiotics.

Thread visibility is important for assurance regarding proper placement of Cu T. Threads are not visible in immediate postpartum period due to large size of the uterus, but with involution Cu T thread becomes visible though sometime it may not be seen due to coiling up of thread. Missing string also require evaluation for expulsion, malposition or uterine perforation**.** In the present study, incidence of missing strings with IUCD in place was 4.67% at the end of 12 months. Ultrasound was done in all cases to ensure proper placement of IUCD. There are limited studies that deal with IUCD missing strings in the literature.

Likewise long thread may be problematic and uncomfortable for the patient that may need trimming at subsequent follow up visits. It may also indicate partial expulsion or malposition of Copper T. Chen [9] stated that before 6 to 8 weeks, 7 (14%) out of 50 subjects in post placental group had a string trim because of long thread.

7% of the women at the end of one year associated other complaints like nausea, weight gain, weakness etc with Cu T insertion. Counseling was done and reassurance was given to these participants. Cu T was removed in 19 out of 300 women due to persistent complaints of pelvic pain and troublesome bleeding not responding to treatment. The cumulative removal rate of IUCD at I year, observed in the present study was 6.33%; this was less than that reported by Hayes *et al.;* [10] Ayhan Sucak [11] *et al.;* reported removal rate of 11.3% in his study.

No cases of uterine perforation or no unwanted pregnancies or an acute complication related to the insertion of the IUD in the present study. No perforation was observed by Celen [3] and Eroglu *et al.;* [7] in their study of post placental Cu T 380A insertion. This coincides well with our study.

The expulsion at 6 weeks, 6 months and 1 year were 12.33%, 5.86% and 2.13%.The cumulative expulsion rate, which was around1 9 % within 12 months in the current study is compatible with the previous reports of Moroy (2003) and Celen [3] and Eroglu [7]. Chen [9] observed 24% expulsion rate in his study on post placental insertion, which is higher than in our study. It was seen that a significant proportion of the expulsions occurred within the first 6 weeks after the insertion of IUD .The most likely reason behind this is the puerperal uterine remodeling, the large uterine volume, the fully dilated cervix and the continuous elimination of lochia in the early days of puerperium.

CONCLUSION

The result of our study indicates that post placental IUD insertions, is generally safe and effective. Even though the expulsion rates are relatively elevated, the post placental IUD insertion should be considered as a proper method of postpartum contraception, especially since the time of delivery provides an excellent opportunity to counsel women and provide them with a safe and effective method of contraception in early postpartum period.

REFRENCES

1. Shukla M, Sabuhi Qureshi C. Post-placental intrauterine device insertion-A five year experience at a tertiary care centre in north India. The Indian journal of medical research. 2012 Sep; 136(3):432.
2. El-Shafei MM, Mashali A, Hassan EO, El-Boghdadi L, El-Lakkany N. Postpartum and postabortion intrauterine device insertion unmet needs of safe reproductive health: three years' experience of Mansoura University Hospital. Egyptian Society of Obstetrics and Gynecology. 2000 Jan; 26(1-3):253-62.
3. Çelen Ş, Möröy P, Sucak A, Aktulay A, Danışman N. Clinical outcomes of early postplacental insertion of intrauterine contraceptive devices. Contraception. 2004 Apr 30; 69(4):279-82.
4. Welkovic S, Costa LO, Faúndes A, de Alencar Ximenes R, Costa CF. Post-partum bleeding and infection after post-placental IUD insertion. Contraception. 2001 Mar 31; 63(3):155-8.
5. Population reports, IUD Series B, B-6, IUDs: an update. December 1995; XXIII(5):9–14, 16.
6. Morrison C, Waszak C, Katz K, Diabaté F, Mate EM. Clinical outcomes of two early postpartum IUD insertion programs in Africa. Contraception. 1996 Jan 1; 53(1):17-21.
7. Eroğlu K, Akkuzu G, Vural G, Dilbaz B, Akın A, Taşkın L, Haberal A. Comparison of efficacy and complications of IUD insertion in immediate postplacental/early postpartum period with interval period: 1 year follow-up. Contraception. 2006 Nov 30; 74(5):376-81.
8. Lopez G. Szpir (Family health international/CRTU programme). Immediate Postpartum insertion of an IUD is safe & effective. Global health technical briefs [Internet]. USA: United States Agency for International Development and Family Health International. 2007.
9. Chen BA, Reeves MF, Hayes JL, Hohmann HL, Perriera LK, Creinin MD. Postplacental or delayed insertion of the levonorgestrel intrauterine device after vaginal delivery: a randomized controlled trial. Obstetrics and gynecology. 2010 Nov; 116(5):1079.
10. Hayes JL, Cwiak C, Goedken P, Zieman M. A pilot clinical trial of ultrasound-guided postplacental insertion of a levonorgestrel intrauterine device. Contraception. 2007 Oct 31; 76(4):292-6.
11. Sucak A, Ozcan S, Çelen Ş, Çağlar T, Göksu G, Danışman N. Immediate postplacental insertion of a copper intrauterine device: a pilot study to evaluate expulsion rate by mode of delivery. BMC pregnancy and childbirth. 2015 Sep 2; 15(1):202.
12. Çelen Ş, Möröy P, Sucak A, Aktulay A, Danışman N. Clinical outcomes of early postplacental insertion of intrauterine contraceptive devices. Contraception. 2004 Apr 30; 69(4):279-82.