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A Comparative Study of Post-Placental and Immediate Postpartum Copper T 380A Insertion

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ABSTRACT

Indian women have an unmet need for contraception in the postpartum period. Women are highly motivated and receptive to Family Planning methods in postpartum. Postpartum IUD insertion immediate post-placental or after 48 hours, are options which merit consideration. A study was conducted among 100 women- 50 women had within 10 minutes postplacental insertion and 50 in the following 48 hours a CuT was inserted and they were compared on a number of parameters like immediate and late complications, continuation rates and expulsion rates. It was found that both forms of postpartum insertions do not increase the risk of complications like pain, infection, bleeding, pregnancy or uterine perforation though the expulsion rates are somewhat elevated. IUD insertion during the postpartum period is thus 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 as compared to interval insertion and allow women to obtain safe, long acting, highly effective contraception while already under the health care system.

KEYWORDS : Intrauterine Device (IUD), Postpartum, Cut 380 A

Introduction

According to USAID/ACCESS 2009 survey, in India, 65% women in the first year of postpartum have an unmet need for Family Planning. Only 26% are using any method of contraception during the first postpartum year. 8% of the 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 should not be depended on for longer than 6 months postpartum and even then there is a failure rate of 2% in those 6 months[5]. It is also the postpartum mother who faces the problem of availing contraceptive measures-both due to social issues and lack of communication facilities especially in rural areas, once they leave the health facility after delivery.

An intrauterine device (IUD) is the most frequently used reversible family planning method in the world[1]. It can be inserted at anytime during the menstrual cycle, within the first 48h postpartum or after 4 weeks postpartum or after an abortion[2]. Women are highly motivated and receptive to Family Planning methods in postpartum period. Breastfeeding women experience less pain during IUD insertion and higher continuation rates than non-breastfeeding ones even if there is a somewhat higher risk of perforation[3]. Thus postpartum IUD is the need of the hour.

Methods

In our study patients were divided into two groups according to the time of insertion of Cu-T 380A:-

1. **Group1:** Post placental- within 10 minutes following delivery of placenta.

2. **Group2:** Immediate postpartum- from 10 minutes after placental delivery to 48 hours of delivery.

50 patients who desired to use CuT 380 A and were above 18 years were included in each group. The patients were counseled regarding the side effects and risks, advantages and disadvantages, method reversibility etc. For group1, counseling was done during antenatal visits, at the time of admission and during early labour. For group 2 who could not be counseled prior to delivery, were counseled on the first postpartum day. Patients with any uterine malformation, bleeding disorder, PID within 3 months prior to pregnancy, anemia, diabetes, hypertension, heart disease, genital malignancy or uterine surgeries were excluded. Cases with APH or PPH, rupture of membranes for >24h and chorioamnionitis were not included. 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, Chi-square test, Pearson correlation etc.

Results

Patients of both the groups were reviewed at one week, one month and at six month. They were advised to visit earlier in case of any untoward symptoms. It was found that difficulty in insertion of CuT 380A was encountered in 4% patients in group2 and none in group1. Cramps were present in 24% patients in group2 and 16% in group1 and there was no incidence of syncope or perforation.

When all the patients were reviewed at one month, 12% patients in group 2 and 8% patients in the group1 had persistent lower abdominal pain. Excessive bleeding was recorded in 4% patients in group 2 and only 2% in the group1. 6% patients in the immediate postpartum group had genital infection in contrast to none in the postplacental group. 4% patients in each of the groups had missing threads though there was no perforation. There were no reported pregnancies in either of the groups.

CuT 380A was removed in 2% patients in each group at 1 month. Expulsion rates at 1 month were 12% in group1 and 14% in group 2. Continuation rates observed after 1 month was 86% in the group1 and 84% in group 2.

Between one to six month period, 9.52% patients in group 2 and 6.97% patients in group1 had persistent lower abdominal pain. Excessive bleeding was recorded in 2.38% patients in group 2 and only 4.65% in group1. 16.6% patients in group 2 and 13.9% in group1 had genital infection. 4.76% patients in group1 and none in group 2 had missing threads though there was no perforation.

Removal rates observed from one to six months were 2.32% in group1 and 2.38% in group2. Differences in expulsion and continuation rates from one month to six months were statistically insignificant.

At the end of six months 16% patients in group 2 and 10% patients in group1 had persistent lower abdominal pain. Excessive bleeding was recorded in 6% patients in each group. 18% patients in group 2 and 12% in group1 had genital infection. 4% patients in group1 and 8% in the group2 had missing threads though there was no perforation. No pregnancy or perforation was observed in both the groups.

Total removals at the end of six months were 4% each groups. Total expulsion rates observed at 6 months was 18% in group2 and 14% in group1. Continuation rates were 82% and 78% in the group1 and

group 2 respectively.

Thus postplacental IUD insertions do not increase the risk of complications. Though the expulsion rates are somewhat elevated, the postplacental IUD insertion should be considered as a proper method of postpartum contraception for women with limited access to medical care, as institutional delivery affords a unique opportunity to address the need for contraception.

Discussion

IUD insertion during the 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 and allows women to obtain safe, long acting, highly effective contraception while already in the health care system. Women during this period are highly motivated and receptive to accept Family Planning methods during the postpartum period.

Pain during insertion was low probably because women in this period are more tolerant to pain. Chen (2010) reported difficulty in insertion in 1.96% patients and pain during insertion in 80% in the postplacental period which corresponds to our study[6]. Less incidence of excessive bleeding at one month can be attributed to breast feeding in these women. Celen (2004) found minimal complications in the postplacental group[7] while Eroglu (2006) found that the incidence of excess bleeding was 1.2% in the postplacental group and 2.3% in early postpartum group[8]. Infection was diagnosed in none of the patients by Eroglu (2006)[8], in 1 out of 235 cases with postplacental insertions by Celen (2004) [7] which was in accordance with our study. Chen (2010) [6] observed that 2% patients in the postplacental group had infections at 6-8 weeks post delivery, which is slightly higher than our study. Missing threads is often because the postpartum uterus is large in size and takes time to involute. Eroglu (2006) reported missing strings in 1.2% in immediate postplacental group and 4.7% in early postpartum group which is similar to our study[8] .Celen (2004) observed no perforation which agreed with our study[7]. While our study reported no pregnancy, Eroglu (2006) reported pregnancies in 4.7% in early postpartum group and none in the postplacental group[8]. The main reason for removal in our study was excessive bleeding. Celen (2004)[7] reported that removal for bleeding and pain at six weeks was 0.3% and for other medical reasons was 0.1% in postplacental insertions which is lower when compared to our study.

Between one to six months, there was no excessive bleeding in postpartum insertions reported by Eroglu (2006)[8] which is lower than our study. Genital infections during this period were high due to higher incidence of long threads accounting for more chances of ascending infection. All these patients responded to antibiotics and there was no incidence of PID necessitating removal of CuT. Missing strings were seen in 3.3% in immediate postplacental group which was higher than our study and 4.2% in early postpartum group which corresponded with our study. In studies conducted by Celen (2004)[7], Chen (2010)[6] and Beltagy (2011) [9] no serious complications such as perforation was noted in these women. While no pregnancy was reported in our study, Celen (2004) [7] reported pregnancies in 0.2% patients in the postplacental group and Eroglu (2006) [8] found pregnancies in 1.6% patients with immediate postplacental group in contrast to none in the postpartum group. Celen (2004) [7] reported that removals for pain and bleeding were 2.8% after postplacental insertions which corresponds well with our study.

At six months, rates of excessive bleeding were less due to lactational amenorrhea. Welkovich (2001) [10] concluded postplacental insertion to be a convenient approach with no observed increase in the incidence of excessive bleeding and endometritis. Eroglu (2006) [8] reported excess bleeding in 2.4% and 4.7% patients in immediate postplacental and early postpartum groups which was slightly lower than our study. Increased rates of infection were due to long threads though there was no PID or CuT removal. Morrison (1996) [11] found infections in <2% patients in their study on postpartum insertions in Africa which was much lower than our study. Eroglu (2006) [8] reported genital infection in 1.3% of postplacental insertions and none in the early postpartum group which was much lower than our study. No perforations were noticed in our study which agreed with those of Morrison (1996)[11] and Eroglu (2006) [8]. None of the women got pregnant in our study while Celen (2004) [7] observed intrauterine pregnancies in 0.75% patients with postplacental insertions at the end of one year. Celen (2004) [7] observed that in postplacental group, removals for bleeding and/ pain were 3.1% in 1 year after insertion which matched with our study. According to Menon (2007) [12], the commonest reason for removal was bleeding.

Expulsions in these women were due to large uterine volume- thus it may not retain a CuT as efficiently as a smaller sized uterus, the fully dilated cervix and the continuous elimination of lochia in the early days of perpeurium. A comparison of the expulsion rates is given below:

S no.	Author	Number of patients	Type of Study	Expulsion rates at 1 month	Expulsion rates at 1 to 6 months	Expulsion rates at 6 months
1.	Celen et al[7]	235	Postplacental	5.1%	2%	12.3%
2.	Eroglu et al[8]	84	Immediate postpartum(within 10 min.)	11%	1.6%	14.3%
		46	Early postpartum(10min -72hour)	14%	8.3%	18.6%
3.	Chen et al[6]	46	Postplacental	-	6%	24%
4.	Present study	50	Postplacental	12%	2.32%	14%
		50	Immediate postpartum	14%	4.76%	18%

Continuation rates of our study corresponded with those of other studies:

S no.	Author	Number of patients	Type of Study	Continuation rates at 1 month	Continuation rates at 1 to 6 months	Continuation rates at 6 months
1.	Celen et al[7]	235	Postplacental	94.3%	94.3%	87.6%
2.	Eroglu et al[8]	84	Immediate postpartum	72%	-	83.2%
		46	Early postpartum	48.8%	-	45.8%
3.	Chen et al[6]	46	Postplacental	84.2%	-	-
4.	Present study	50	Postplacental	86%	95.34%	82%
		50	Immediate postpartum	84%	92.85%	78%

Conclusion

The outcomes of our study indicate that postplacental IUD insertion is as safe and effective as postpartum insertions within 48 hours. Both the type of postpartum insertions do not increase the risk of complications like pain, infection, bleeding, pregnancy or uterine perforation though the expulsion rates are somewhat elevated in post placental group.

Postplacental IUCD insertion should be encouraged as an appropriate method of contraception, because antenatal period provides an excellent opportunity to counsel women and provide them a safe and effective method of contraception following delivery in the early postpartum period. This need for contraception is very great in our country as women from remote villages encounter difficulty in reaching the Family Planning clinics for contraceptive advice. For this reason it is important to ensure that women receive a convenient and long lasting contraception before they leave the healthcare system.

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