

Original Research Article

Clinical outcome of post placental IUD CuT380 insertion in terms of expulsion

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ABSTRACT

Background: Insertion of an intrauterine contraceptive device (IUD) immediately after delivery has been recommended by the World Health Organization (WHO), as one of the safe and effective methods of temporary contraception. 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. This approach is more applicable to our country where delivery may be the only time when a healthy woman comes in contact with health care personnel. However, immediate post-partum IUD insertion may have disadvantages as well. The risk of spontaneous expulsion may be unacceptably high.

Methods: After taking approval from hospital ethical committee, all women planning vaginal delivery desiring IUD, admitted through OPD and emergency were evaluated in detailed on design Performa Performa include patient's identity, age, parity, gestational age, no of alive children, outcome and timings of insertion. Informed consent was obtained. With aseptic precautions IUD was inserted with Kelly's forceps in the uterine cavity up to the fundus, then cervix was examined for thread (that should not be visible at cervix if proper insertion done). The procedure was performed by myself. Patients were followed at 6week by examining the thread of IUD. All the information was recorded by myself. Follow up was done by taking patients contact number.

Results: In our study, out of 300 cases, 63.67% (n=191) were between 18-30 years of age while 36.33% (n=109) were between 31-40 years of age, mean±sd was calculated as 29.49±4.62 years, mean gestational age was calculated as 38.53±0.94 weeks, mean parity was calculated as 3.49±1.06 paras. Frequency of expulsion in post placental intra uterine device cuT 380 insertions reveals in 8.67% (n=26).

Conclusions: We concluded that the frequency of expulsion in post placental intra uterine device cuT 380 insertions is not significantly higher and appears to be safe and effective method of contraception.

Keywords: Contraception, Post placental intra uterine device, Expulsion

INTRODUCTION

Fertility control with the use of contraception is essential for the health and welfare of Individual's families and communities'.¹ In the postpartum period both mother and

baby need attention as morbidity as well as mortality is significantly. Early pregnancy and a shorter inter-pregnancy period can lead to abortion, prematurity, obstetrical bleeding, low birth weight and even fetal and/or maternal death.²

Despite of high prevalence, unintended pregnancy rate is very high. Long-acting reversible contraception methods including IUD helps to decrease unintended pregnancy rate. Women do not receive these techniques because of no nearby health provider, no expert person available for IUD insertion, and most finally an early conception.³

For those with non-availability of facility, delivery in a center with expertise is an ideal time to get IUD inserted.⁴ It allows women to avail the facility of effective contraception i.e postpartum IUD. It does not affect breast feeding and associated with less discomfort than interval insertion.⁵

Post placental IUD insertion is the insertion of an IUD during the 10 min period after placenta removal. Expulsion rate in the post-placental IUD insertion cases is higher as compared to the cases with interval insertion; still its benefits outweighs the risk of expulsion. Cumulative expulsion rate after 6 weeks is reported to be 5.1%.⁶

Some of the IUDs such as cuT 380A are even equivalent to tubal sterilization in terms of efficacy.⁷ Medical benefits of fertility regulation and effective contraceptive methods for maternal and newborn health are spacing of birth decrease infant and neonatal mortality rate. It allows longer breast feeding improving overall health and wellbeing of newborn. Second it prevents high risk pregnancies among young and adolescent and multiparous women. Finally it prevents unsafe abortion being performed to terminate unwanted pregnancies.⁸

The rationale of my study is to implement the use of postpartum IUD Cut380 as it is one of the effective way of contraception with less expulsion rate. It can be used immediately after delivery and women needs less repeated visit to hospital and health care centre for follow up with increased satisfaction rate.

METHODS

This descriptive case study was conducted in the Department of obstetrics and gynecology, PMC Allied Hospital, Faisalabad after 6 months synopsis approval. Sample size 300 was calculated using WHO sample size calculator. Expected prevalence of P=5.1% and confidence level=95%, Absolute precision required=2.5% Sampling was done using non probability consecutive sampling. With the parity more than 3 alive children, pregnant females between the ages of 18-40 years who delivered through vaginal delivery having >37 weeks of gestation were included in the study. Following cases were excluded: already diagnosed cases of Fibroid uterus confirmed on ultrasound; patients with Antepartum haemorrhage (APH) bleeding from or into the genital tract, occurring from 24+0 weeks of pregnancy, Postpartum bleeding or postpartum hemorrhage (PPH).

After taking approval from hospital ethical committee, all women planning vaginal delivery want contraception and gave consent for intrauterine device admitted through OPD and emergency were evaluated in detailed on design Performa. Performa include patient’s identity, age, parity, gestational age, no of alive children, outcome and timings of insertion. Informed consent was obtained. With aseptic precautions IUD was inserted with kellys forceps in the uterine cavity up to the fundus, then cervix was examined for thread (that should not be visible at cervix if proper insertion done). The procedure was performed by myself.

Patients were followed at 6 week by examining the thread of intrauterine device. And information was recorded by myself. Data analysis was done on Statistical package for social sciences (SPSS) version 16, mean and standard deviation for age, gestational age and parity was calculated and frequency and percentages were calculated of expulsion. Effect modifiers like age, gestational age and parity were controlled by stratification. Post stratification chi-square test was applied. P<0.05 was taken as significant.

RESULTS

A total of 300 cases fulfilling the inclusion/exclusion criteria were enrolled to determine the frequency of expulsion in post placental intra uterine device cu-T 380 insertions. Age distribution of the patients was done showing that 63.67% (n=191) were between 18-30 years of age while 36.33%(n=109) were between 31-40 years of age, mean±sd was calculated as 29.49±4.62 years.

Table 1: Details of all the descriptive variables like age, gestational age, parity and expulsion of IUD among 300 cases studies (n=300).

	Age(in years)	No. of patients	%
Age (in years) 29.49±4.62	18-30	191	63.67
	31-40	109	36.33
Gestational age (weeks) 38.53±0.94	37-39	253	84.33
	40-41	47	15.67
Parity 3.49±1.06	1-3	159	53
	>3	141	47
Expulsion	Yes	26	8.67
	No	274	91.33

Gestational age of the patients was calculated as 84.33% (n=253) were between 37-39 weeks and 15.67% (n=47) were between 40-41 weeks of gestation, mean±sd was calculated as 38.53±0.94 weeks. Parity distribution shows that 53% (n=159) were between 1-3 paras while 47% (n=141) had >3 paras, mean±sd was calculated as 3.49±1.06 paras.

Table 2: correlation of various effect modifiers with the expulsion of the IUDs among the 300 cases studied.

Correlation	Effect Modifier	Grouping	Expulsion (N=26)		P value
			Yes	No	
Expulsion of IUD with regards to age	Age (in years)	18-30	13	178	0.12
		31-40	13	96	
Expulsion of IUD with regards to gestational age	Gestational age in weeks	37-39	23	230	0.59
		40-41	3	44	
Expulsion of IUD with regards to parity	Parity	1-3	17	159	0.22
		>3	9	141	

Frequency of expulsion in post placental intra uterine device cuT 380 insertions reveals in 8.67% (n=26) while 91.33% (n=274) had no expulsion. Stratification for age, gestational age and parity was recorded and presented in Table 2.

DISCUSSION

According to the WHO guidelines insertion of IUD soon after the end of pregnancy is safe as well as effective temporary contraceptive method. As just after delivery women are motivated and demand contraception for the sake of her child's health. But if they are asked to come after 6 weeks, they might not come back or might get pregnant again. Using intrauterine device for contraception is simple, cheap and effective. Still, it's not perfect as it has some disadvantages as well; major being the significant expulsion rate.⁹

We planned this study to implement the use of postpartum IUD Cut380 as it is one of the effective way of contraception with less expulsion rate.

In our study, out of 300 cases, 63.67% (n=191) were between 18-30 years of age while 36.33% (n=109) were between 31-40 years of age, mean±sd was calculated as 29.49±4.62 years, mean gestational age was calculated as 38.53±0.94 weeks, mean parity was calculated as 3.49±1.06 paras. Frequency of expulsion in post placental intra uterine device cuT 380 insertions reveals in 8.67% (n=26).

Shukla et al evaluated efficacy of immediate post-partum IUD insertion after vaginal birth or c-section in India and reported that 1037 (78%) came back and the expulsion rate after 6 months was 10.7% and none of the samples in the study had misplaced intrauterine device.¹⁰

In another study of India, it was reported that those cases who got IUD inserted in 10 days in the post-partum period had a significantly high expulsion rate; 67% retained the IUD with 4.3% had IUD displaced in the cervical canal and 6.1% with complete expulsion. Sofat et al reported that most of the cases came for IUD insertion just after delivery were mostly of rural setting.¹¹

In a study including 168 women, about 16.4% women had IUD expulsion after insertion of IUD in the immediate post-partum period.¹⁰ Similar results were reported by Celen et al (11.3%).¹²

A further analysis of the Family Health International trial reported a significantly high expulsion rate in cases who got IUD inserted in 1st half of the menstrual period as compared to those insertions done in the 2nd half.¹³

The expert level of the person inserting the IUD also matters. Thiery et al reported that more the expertise lower were the expulsions rates, although definition of skill level was not given.^{14,15}

IUDs in the immediate post-partum period have higher expulsion in when compared to interval insertions. Mostly the women with expulsion use another or same technique for contraception to avoid accidental pregnancy. IUDs can be used immediate after delivery and less repeated visit to hospital and health care center.

Bottom-line, most of the studies reported no association of chances of adverse effects like pain, bleeding or infection and sometimes perforation, with time and/or route of IUD. Most importantly a very low risk of perforation with IUD use during post partum period is a major point of its recommendation. However, this technique may be used for an effective contraceptive method with less chances of expulsion.

Our study has certain limitations. As the follow up was by self-reporting to obstetrics and gynaecology department, so we may have missed some cases of expulsion of IUCD resulting in unwanted pregnancy.

CONCLUSION

We concluded that the frequency of expulsion in post placental intrauterine device cuT 380 insertions is not significantly higher and is equally safe and cheap while effectively achieving the purpose of contraception.

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