Original Research Article

Evaluation of safety and expulsion rates in post placental intrauterine device insertion: a comparative study

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Abstract

Background: Comparative evaluation of safety and expulsion rates in post placental IUCD and interval IUCD **Methods:**The study included 203 patients delivered in SMGS Hospital Jammu who were divided into Group A (Post placental insertion) and Group B (Interval insertion).Patients with Hb>or=8mg/dl,no ongoing infections, age18-40 years were included in the study after counselling in antenatal,early labour or postnatal period. All patients were followed up for 6 months.**Results:**The cumulative expulsion at 6 months was almost same in both the groups (11% v/s 9%) and was more in vaginal delivery as compared to caesarean delivery.Number of removal was also almost similar in both the groups (18% v/s 21%). The most common cause for removal in group A was partial expulsion and in group B was missing thread.The continuation rates were comparable in both the groups at 6 wks and 6months with rates of 92% and 86.9% in group A and 88% and 88.6% in group B respectively.No statistical difference was observed between the total complications in both the groups at 6 wks (p=0.54) and 6 months (p=0.29) **Conclusion:**In the present study, we came to the conclusion that postpartum insertion of IUCD is safe, effective, feasible and reversible method of contraception. PPIUCD should be recommended for routine use as the primary means of contraception in family planning programmes**.**

Keywords: PPIUCD, Expulsion, removal, continuation.

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Introduction

In India, 65% of women in the first year have an unmet need for family planning, but only 26% are using any method of contraception during first year postpartum [1,2]. During postpartum period women are often highly motivated to initiate contraceptive use[3]. Post placental IUCD or insertion of IUCD at 10 min after delivery is highly appealing for various reasons.In developing countries delivery may be the only time when a woman comes into contact with the health care provider and the chances of returning for contraception are uncertain.So, CU-T insertion immediately after placental expulsion is important and effective, as it saves additional visit of women to hospital.This study will aid in increasing the contraception coverage and will in return revitalise the use of this long acting reversible contraceptive in our set of highly unmet demand of family planning.Considering these facts, the present study was conducted to compare the safety and expulsion rates of Cu-T 380A as immediate PPIUCD with those of same in interval insertion.

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Aims and objectives

Comparative evalution of PPIUCD and interval IUCD in terms of safety and expulsion rates.

Methods

Study Design;Prospective Observational study.

Study Group: 203 women were included in the study, 101 were included in immediate postpartum IUCD

group A (In vaginal delivery as well as caesarean section). Remaining 102 were included in interval group B.1 patient in group A and 2 patients in Group B were lost to follow up.Finally, there were 100 patients in each group.

Inclusion criteria

1.Age 18-40 yrs
2.Willing to participate
3.Previously counselled
4.No previous caesarean section
5.Haemoglobin >or= 8mg/dl

Exclusion criteria

1.PROM > 18hrs
2.Chorioamnionitis
3.PPH
4.Obstructed labour
5.Distorted uterine cavity by fibroid or congenital malformation.

Subjects for the study group were given detailed information about the procedure and written consent was taken. All the participants who accepted this method, IUCD were placed fundally immediately after the delivery of placenta by using placental forceps in vaginal delivery and sponge holding forceps in caesarean section before closure of uterine incision. These cases were followed at 6 weeks and 6 months(In group B IUCD was inserted by no touch withdrawal technique) and complaints like bleeding,pain, foul smelling discharge, fear, expulsion, tenderness were noted.Efficacy analysis was done on basis of contraceptive failure and expulsion rates were calculated on the basis of the percentage of patients who expelled the IUCD, partially or completely, spontaneously over a period of 6 months.Statistical analysis of the data collected was done using appropriate Chi Square test and independent t-test

Results

Total acceptance rate of PPIUCD in our study was 41.5% (252 out of 607 women). Of the 252 subjects who accepted,203 were selected for study.101 underwent insertion immediately after delivery, both intra caesarean and postplacental after vaginal delivery and were allotted group A.The rest 102 were allotted group B who underwent interval insertion after 6 wks.1 patient in group A and 2 in group B were lost to follow up. Majority of the cases who accepted PPIUCD belonged to the age group 21-25 yrs(49% in group A and 38% in group B)(Table 1).

Table 1: Acceptance rates

Age groups(years)	Group A (%)(N=100)	Group B (%)(n=100)
<20	8 (8%)	2 (2%)
21-25	49 (49%)	38 (38%)
26-30	32 (32%)	46(46%)
31-35	9 (9%)	14 (14%)
>35	2 (2%)	0
	100	100

Mean age in group A: 25.65 ± 4. 13years
Mean age in group B: 26.52 ±3. 57 years.

In both groups counselling was more successful in the early labour (64% in group A and 57% in group B) 52% of the patients in group A had insertion after vaginal delivery, postplacental,while 48% had intra-caesarean insertion in group B, there were 53% insertions 6 weeks after vaginal delivery and 47% after caesarean section as shown in Table 2.

Table 2: Mode of delivery

Mode of delivery	Group A(%)	Group B(%)
Vaginal delivery	52 (52)	53 (53)
LSCS	48 (48)	47 (47)
TOTAL	100	100

Table 3: Expulsion rates in IUCD over a period of 6months

Timings of expulsion	Group A(n=100)		Group B(n=100)	
	VD	LSCS	VD	LSCS
Before discharge	2	0	0	0
6 weeks	5	1	4	1
6 months	0	3	2	2
Total	7	4	6	3

VD: vaginal delivery

IUCDs were removed in total 18 cases (18%) in group A and 21 (21%) cases in group B.The most common cause for removal in groups A was partial expulsion and in group B was missing thread (Table 4).

Table 4: Causes of removal of IUCD over a period of 6 months

Reason of removal	Group A (%) (n=100)		Group B (%) (n=100)	
	LCSC	VD	LCSC	VD
Partial expulsion	4	5	3	5
Missing thread	4	1	6	4
Bleeding	0	2	0	2
Pelvic infection	0	1	0	1
Failure	0	1	0	0
TOTAL	18		21	

*vd= vaginal delivery

The continuation rates were comparable in both the groups at the end of 6 weeks as well as 6 months. (Table 5)

Table 5: Continuation rates

Continuation rates	Group A (%)	Group B(%)
6 weeks, n/x (%)	92/100 (92)	88/100 (88)
6 months, n/x (%)	80/92 (86.9)	78/88 (88.6)

n= no. of subjects continuing with IUCD

x= no. of subjects with IUCD in situ at the start of the time period under observation.

Complications experienced were menstrual abnormalities, pelvic pain, pelvic infection and dysmenorrhea at 6 weeks as well as 6months follow up. Complication in both the groups were comparable at 6 weeks and 6 months except dysmenorrhea and pelvic pains which are more in interval insertions at 6weeks and 6 months respectively.

Statistical difference was not significant(Table 6)

Table 6: Complications

Complications	6 weeks (%)		6 months (%)	
	Group A (n=100)	Group B (n=100)	Group A (n=91*)	Group B (n=89)**
Menstrual abnormalities	16 (16)	17 (17)	11/91 (11.9)	13/89(14.6)
Pelvic pain	14(14)	13 (13)	9/91 (9.8)	16/89(17.9)
Pelvic infection	3 (3)	3(3)	2/91 (2.2)	1/89(1.1)
Dysmenorrhea	0 (0)	5(5)	7/91 (7.6)	6/89(0.7)
Statistical inference	p= 0.54 not significant		p= 0.20 not significant	

In the present study we came to the conclusion that postpartum insertion of IUCD is safe, effective, feasible and reversible method of contraception. Compared with interval insertions, postpartum insertions do not increase risk of infection, endometritis, uterine perforation or bleeding.

Most of the patients who underwent vaginal post placental insertions experienced no pain at all during insertions as compared to interval insertion.The positive outcome of this study and the results being similar in both the groups should provide for routine use of PPIUCD insertion as the primary means of contraception and its regular use being incorporated in health and family planning programmes.

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