

Original Articles

Prospective Study for Evaluation of PPIUCD Insertion as a Method of Contraception

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KEY WORDS : ·Intra-caesarean insertion, vaginal insertion, PPIUCD, Post placental insertion, Continuation rate, Expulsion

ABSTRACT:

Background : Now a days institutional deliveries have increased in India, thereby providing opportunities for quality postpartum family planning services. Post placental intra-uterine device has many advantages like providing contraception immediately after childbirth, non-interference with lactation and high efficacy. This study aims to compare the complication rates following insertion of immediate post placental IUCD (PPIUCD) with interval insertion.

Methods : Prospective analytical study was conducted from January 2018 to December 2018 department of Obstetrics and Gynaecology, at GMERS medical college, Sola, Ahmedabad, India. After counselling with patients and her relatives during antepartum period, IUCD insertion was done in 719 patients, out which in 208 patients inserted vaginally and 511 patients during caesareansection. These patients were evaluated at 6 weeks and 6 months regularly.

Results : Both methods were found effective and safe. Out of 719 patients,670 patients had followed up as per protocol. 29 cases who lost for follow up and 20 cases who had spontaneous expulsion were excluded from study. Missing threads were detected more in caesarean group (30%) than vaginal group (19%). One of the disadvantages of PPIUCD is the high rate of expulsion, Most of the expulsions occur within 3 months of delivery. No pregnancy and perforation were documented in the study.

Conclusion : PPIUCD is very effective, safe and reversible contraceptive method which provides contraceptive effect soon after birth. The PPIUCD is a long-acting reversible contraceptive method that is suitable for use in all women in postpartum period. Missing strings after PPIUCD insertion is a common problem encountered during follow up examination and better management has to be provided.

INTRODUCTION

Most women do not desire a pregnancy immediately after a delivery but are unclear about contraceptive usage in postpartum period. This results in unplanned and undesired pregnancies, which in turn increases induced abortion rates and consequently maternal morbidity and mortality. In a recent study of postpartum unintended pregnancies 86% resulted from non-use of contraception and 88% ended in induced abortions.^[1]

Only 26% of post-partum women are using any method of family planning during 1st post-partum year.^[2]

Sterilization is leading method of contraception in India. Hence, immediate post-partum period is favourable time for counselling and addressing issue of birth spacing because women, who have given birth recently, are highly

motivated to use contraception. It has major advantage over interval insertion as there it rule out pregnancy and already they are in health care facilities. In developing countries like India, delivery is only opportunity when women come in contact with health care provider. An intrauterine contraceptive device (IUCD) has several advantages for use in postpartum period as it is an effective, long term reversible, is coitus independent, and does not interfere with breast feeding. Postpartum insertion avoids the discomfort during interval insertion and insertion related bleeding will be masked by lochia.^[3]

The string of IUCD is used to locate the device in situ and also to remove device. Missing strings are common findings during PPIUCD follow up as compared to interval IUCD. During follow up period, pelvic ultrasound is to

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every woman, if necessary ray abdomen. For retrieval of displaced IUCD invasive methods may be needed.

AIM

The aim was to study the incidence, management, clinical outcome of missing strings, rates of complications like infection, heavy menstrual bleeding, lower abdominal pain, rates of removal and to compare among two modes of insertion (after vaginal delivery & intra caesarean insertion group).

OBJECTIVES

It was a prospective study conducted from January 2018 to December 2018 in the Department of Obstetrics and Gynaecology at GMERS medical college and hospital, Sola.

INCLUSION CRITERIA

1. Post-partum mothers of any age in post placental period
2. Post-partum mothers within 48 hours of delivery
3. Caesarean section

EXCLUSION CRITERIA

1. Mothers >48 hrs post-partum
2. Prolonged rupture of membrane >24 hours
3. PPH
4. HIV reactive patients
5. Hb <= 8%
6. PID
7. Uterine anomaly
8. Diabetes
9. Heart disease
10. Patients who did not want PPIUCD

The IUCD used was CuT-375, which was available free of cost in the Government Program. This was placed in uterine fundus with the help of long and curved forceps without lock (Kelly's Placental Forceps) for vaginal insertions, within 10 minutes of removal of placenta or within 48 hours. During caesarean section ring forceps were used to place the IUCD in fundus of uterus through the lower segment incision. Strings were put inside uterine cavity pointing towards cervical canal. The IUCD strings were not trimmed in both types of insertions and left in uterine cavity. Total 1000 patients were counselled of them; 750 patients were willing for Cu T insertion. CuT insertion was done in 719 patients. In 208 patients IUCD was inserted vaginally within 10 minutes of placenta removal and within 48 hours of delivery. In 511 caesarean sections IUCD was inserted following delivery of

placenta. Depending upon mode of delivery, they were divided in two groups: vaginal PPIUCD group and intra caesarean section PPIUCD group. Out of 719 patients, 670 patients had follow up as per protocol. 29 cases who lost for follow up (11 in vaginal group and 18 in intra caesarean group) and 20 cases who had spontaneous expulsion (14 in vaginal group and 6 in intra caesarean group), were excluded from study. Follow up of patients of both groups was done at 6 weeks interval. During follow up visits main focus was complaints of patients, per speculum examination for visibility of strings, pelvic ultrasound. Follow up of patients done at regular 6 months interval. All information provided by this study groups were used for calculating statistics and tabulation of descriptive data was prepared.

In this study, it was found that second Para (50.34%) patients accepted PPIUCD more than others. Patient of age group of 20-24 (50.34%) had the best acceptance of PPIUCD followed by 25-29 years (30.14%).

At 6 weeks follow up visit each and every patient showed proper placement of IUCD on USG. On per speculum examination at 6 weeks follow up, in 80.88% patients of vaginal group, strings were visible. In intra caesarean group, 69.6% patients had visible strings on per speculum examination. Missing strings were found in 183 patients at 6 weeks follow up (in 19.12% patients in vaginal group and in 30.39% patients in intra caesarean group). At 6 months follow up missing strings were found in 164 patients (14.75% in vaginal group and 28.33% in intra caesarean group). There was spontaneous descent of strings in 18 cases after 6 months. Heavy menstrual bleeding was complained by 10% patients of vaginal insertion group and by 7% patients of intra caesarean insertion group patients. No pregnancy was reported with CuT in situ in any group. Only 2% patients were presented with PID in both vaginal and caesarean group. Abdominal pain was complained by 6% patients of vaginal group and 5% patients of caesarean group patients. PPIUCD had to be removed in 46 women. 12 (4.3%) following vaginal insertion and 34 (7%) following intra caesarean group. PPIUCD had to be removed in 3% patients for vaginal bleeding in vaginal group and 1% in caesarean group. Abdominal pain was the cause for PPIUCD removal in intra caesarean insertion group for 1% patients and in vaginal group for 2% patients. Missing thread was reason for IUCD removal in 2% of patients in vaginal group and 4% patients in caesarean group though IUCD was in situ in USG. Total removal rate was 4% in vaginal group and 7% in caesarean group. Twenty (2.78%) cases of spontaneous expulsion of PPIUCD were reported.

RESULTS AND ANALYSIS

Table No 1: Age group distribution

Age group (years)	Total=719 N=(%)
<19	16(2.32)
20-24	362(50.34)
25-29	216(30.14)
30-34	89(12.42)
35-39	28(4.01)
40-44	8(1.16)

Table No 2 : Education status

Education status	Total=719 N=(%)
No formal education	89(12.41)
Primary	315(43.81)
Secondary	238(33.10)
Higher secondary	40(5.06)
Others	37(5.14)

Table No 3: Reason for removal in both groups

Reason for removal	Vaginal group=183 N=(%)	Intra caesarean Group=487 N=(%)	Total=670 N=(%)
Bleeding PV	6(3)	5(1)	11(1.64)
Abdominal pain	4(2)	7(1)	11(1.64)
Missing strings	4(2)	20(4)	24(3.58)
Total	12(4.37)	34(7)	46(6.86)

Table No 4 : Comparison of complications in both groups

Complications	Vaginal group=183 N=(%)	Intra caesarean Group=487 N=(%)	Total=670 N=(%)
Bleeding PV	20(10)	31(7)	51(7.96)
Pregnancy	0(0)	0(0)	0(0)
Infection	4(2)	7(2)	11(1.64)
Abdominal pain	11(6)	25(5)	36(5.37)
Perforation	0(0)	0(0)	0(0)

Table No 5: Follow up of missing strings in both groups

Complications	Vaginal group=183 N=(%)	Intra caesarean Group=487 N=(%)	Total=670 N=(%)
Missing strings at 6 weeks	35(19.12)	148(30.39)	183(27.31)
Missing strings at 6 months	27(14.75)	138(28.33)	164(24.47)
Removal of IUCD in case of missing strings	2(1.09)	20(4.10)	22(3.28)

DISCUSSION

Acceptance of PPIUCD was higher among women with Primary and secondary education (43.81% and 33.10%), than those with non-formal or higher education (5.06 and 5.14 %). This finding confirms importance of education in deciding future pregnancy. This was similar to a study done in Egypt by Safwat et al.^[4] where women with no formal education had an acceptance of 9.4 %, while those with formal education were 19.4 %.

One of the disadvantages of PPIUCD is the high rate of expulsion, as after child birth uterus is contracting and cervix is dilated. Most of the expulsions occur within 3 months of delivery. When IUCD is inserted immediately postpartum, expulsion rate at 6 months ranged from 31 to 41 per 100 in a WHO multicenter trial.^[4]

In present study, it was 6.7% in vaginal group and 1.1% in intra caesarean group with overall expulsion rate of 2.8%. Celen S et al in 2004 found that one year cumulative expulsion rate of CuT was 12.3% in early post-partum insertion of IUCD (vaginal group) and another study conducted by him in 2011 found 17.6% expulsion rate in intra caesarean IUCD.^[5,6]

Most common reason for discontinuation is complain of missing strings followed by heavy menstrual bleeding and abdominal pain.

IUCD strings were visible in 72.6% women at 6 week and in 75.5 % women at 6 months. Bhutta et al reported visibility of 92% & 96% at 6 months in intra caesarean group and interval insertion group respectively.^[7]

In case of PPIUCD insertion, thread may take time to descent. Usually 75% of threads are visible by the end of 3 months. Contraceptive efficacy was same in both group (0 per 100 women year). Failure rate of about 2-3 pregnancies per 100 women year has been described in case of interval IUCD insertion. Sujnanendra M reported 1.9% failure rate following PPIUCD.^[8]

Pelvic ultrasound was done in all cases at 6 weeks follow up. In many cases USG was done more than once. No perforation was found in any group in present study. In case of PPIUCD insertion perforation is very rare. Those who had intra caesarean insertion were more satisfied (73%) with this method than vaginal delivery group (66%) supported by study Jisha Bai C. P et al.^[9] In present study, PPIUCD was found to be very safe and effective method of contraception among both the groups similar to inference drawn by Cochrane Database review by Grimes et al. in 2010.^[10]

CONCLUSION

The PPIUCD was demonstrably safe, having no reported incidence of perforation with low rates of expulsion, pelvic

infection, and few lost strings. We can conclude that Inserting CuT 380 A is safe and effective and has high retention rate in both vaginal and caesarean group. Most of the expulsions occur within 3 months of delivery. Missing strings after PPIUCD is a common problem encountered during follow up and invasive methods are needed for IUCD removal with non-visible strings.

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