

To evaluate the efficacy and complications of post placental IUCD insertion in vaginal and post cesarean deliveries

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Abstract

Introduction: PPIUCD is an emerging contraceptive method for women which is easily available, safe, efficient, long acting, reversible and available just after birth of baby.

Aims and Objectives

- To study the efficacy of postplacental IUCD insertion in vaginal and cesarean deliveries.
- Comparative evaluation of postplacental IUCD in vaginal and cesarean insertion in terms of counseling and complications.

Material and Method: This study was conducted at Department of Obstetrics S& Gynecology ,SMS Medical College,Jaipur .Total 150 Vaginal and Cesarean Deliveries were included in this study.Women counseled for PPIUCD during antepartum, intrapartum or during preparation of cesarean section for post placental IUCD insertion in cesarean delivery or vaginal delivery and followed for any complication.

Observation: In our study it was observed that the proportion of parturient accepting post placental IUCD on counseling was 27.98% in vaginal delivery and 36.95% in cesarean delivery. Excessive bleeding through os was seen in 6 to 8% of cases, missing tail was seen in 38.7% of cases in group B and 8.7% of cases in group A had expulsion of IUCD. There was higher acceptance of post placental IUCD with better follow up, with no expulsion and higher continuation rate in cesarean delivery in comparison to vaginal delivery.

Conclusion: To conclude post placental IUCD is an effective, reversible method of contraception.specially in area where the situation is of limited access to post-partum care and inability of women to return back for contraceptive measures.

Keywords: Postplacental; Postcesarean; Postpartum; Contraception; Missing Thread

1. Introduction

Population explosion is a great menace for mankind, especially in the third world. Studies have shown that pregnancies taking place within 24 months of previous birth have higher risk of adverse outcomes like anemia abortions, premature labour, low weight babies, postpartum hemorrhage, fetal loss and maternal death. Hence, it is utmost important to curtail the unwanted and unintentional pregnancies through various contraceptive measures.

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The period of time preceding and immediately following the birth of the child represents a valuable opportunity for the woman or couple to learn about and take advantage of family planning services. These are times when women are most likely to access formal health care through antenatal care visits and skilled birth attendance and motivated to space or limit subsequent pregnancies [1].

1.1. Benefits of Immediate PPIUCD

- Convenience; saves time and additional visit.
- Safe because it is certain that she is not pregnant at the time of insertion.
- High motivation (woman and family) for a reliable birth spacing method.
- Has no risk of uterine perforation because of the thick wall of the uterus.
- Reduced perception of initial side effects (bleeding and cramping).
- No effect on amount or quality of breast milk.
- The woman has an effective method for contraception before discharge from hospital.
- Saves time as performed on the same delivery table for post-placental/intracesarean insertions. Additional evaluations and separate clinical procedure is not required.
- Need for minimal additional instruments, supplies and equipments.
- Convenience for clinical staff; helps relieve overcrowded outpatient facilities thus allowing more women to be served.

With the newer understanding of IUCD in term of effectiveness, acceptability, safety, reversibility, feasibility of insertion immediately after birth and increased institutional deliveries with the introduction of JSY, this present study is undertaken.

Aims and Objectives

- To study the efficacy of postplacental IUCD insertion in vaginal and cesarean deliveries.
- Comparative evaluation of postplacental IUCD in vaginal and cesarean insertion in terms of counseling and complications.

2. Material and methods

2.1. Place of the study

Department of Obstetrics and Gynaecology at SMS Medical College & Associated Group of Hospitals, Jaipur.

2.2. Study Design

Prospective interventional analytical study.

2.3. Sample Size

- 150 Vaginal Deliveries
- 150 Cesarean Deliveries

2.4. Inclusion Criteria

Women attending ANC clinics and admitted in labour room in early labour (between 28 to 42 weeks of gestation) counseled for PPIUCD insertion, giving consent for the same and not having any exclusion criteria.

2.5. Exclusion Criteria

- Chorioamnionitis
- More than 12 hrs from rupture of membrane
- PPH
- Extensive genital trauma
- Known distorted uterine cavity (uterine septum, fibroid uterus etc)
- Previous history of malignant or benign trophoblastic disease
- Sexually transmitted diseases
- Severe anemia

- Antepartum haemorrhage
- Intrauterine death

2.6. Assessment of women for provision of PPIUCD were done in 2 phases

The first assessment was the general review of the woman's medical history and eligibility for the method. A second assessment was done immediately prior to insertion to assess those criterias which may have changed the eligibility as a result of labour.

Proper Informed Consent Was Taken

2.7. Material for PPIUCD insertion

- CuT380A sterile package.
- Long placental forceps without lock.
- Sponge holding forceps and Sim's speculum.

Post insertion cases were followed up just before discharge, SOS and up to 12 weeks after delivery. As to clinical follow-up, the cases were asked about IUCD and examined accordingly. Special attention was given to IUCD expulsion, hemorrhages, pelvic pain, infection, string coming out, exclusive breastfeeding or not, and resuming menses. Out of those, cases were randomly allocated 150 from vaginal delivery and 150 from cesarean delivery group.

Their results were submitted to statistical analysis to derive the conclusion.

3. Results

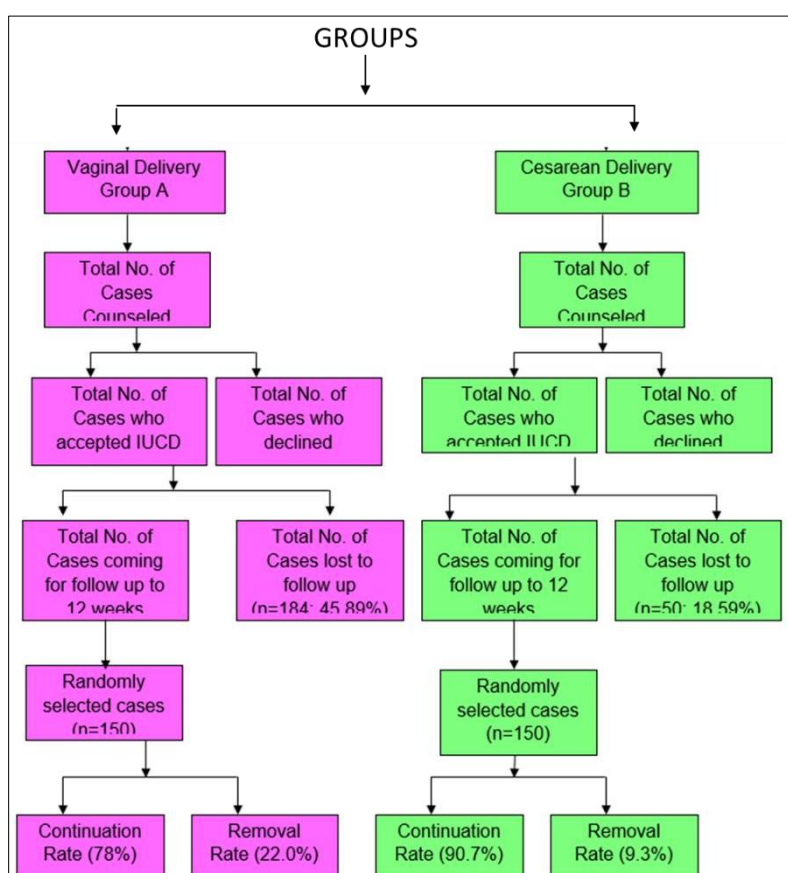


Figure 1 Flow chart showing the groups studied and results obtained

Table 1 Distribution of Cases according to Parity

Parity	Vaginal Delivery (Group A)		Cesarean Delivery (Group B)	
	No.	%	No.	%
1	14	9.3	25	16.7
2	40	26.7	103	68.7
3	39	26.0	17	11.2
4	27	18.0	4	2.7
≥5	30	20.0	1	0.7
Total	150	100	150	100
Mean	3.39		2.03	
P	<0.001			

According to parity status, in group A 9.3%, 26.7%, 26.0%, 18.0% and 20.0% of cases are parity 1,2,3,4 and ≥5 respectively. On the contrary in group B a sharp shoot is seen at parity 2 with 68.7% of cases resulting in highly significant p value.

Table 2 Distribution of Cases according to Complaints up to 12Wks follow up

Complaints	Vaginal Delivery (Group A)		Cesarean Delivery (Group B)		P
	No.	%	No.	%	
Psychosocial	23	15.3	16	10.7	>0.05
Pain	22	14.7	14	9.3	>0.05
Protrusion of tail at introitus	15	10.0	0	-	<0.001
Bleeding PV	12	8.0	9	6.0	>0.05
Spotting	5	3.3	4	2.7	>0.05
Coital Dysfunction	1	0.7	0	-	>0.05
Total no. of Cases having complaints	63	42.0	37	24.7	-
Total No. of Cases	150	100	150	100	-

The cases were enquired about their complaints or issues at follow up and it was found that most common complaint was psychosocial issue (15.3% and 10.7% in groups A and B respectively). In group A other problems were pain (14.7%), bleeding PV (8%), protrusion of tail at introitus (10%) and spotting (3.3%). In group B pain was present in 9.3%, bleeding PV in 6% and spotting in 2.7% of cases. In group B, there was no complaint of protrusion of tail hence p value significant for that parameter, rest all parameters had p value insignificant. The total number of complaints were more than number of patients having complaints as many of them had multiple problems.

Table 3 Distribution of Cases according to clinical findings up to 12Wks follow up

Clinical Findings	Vaginal Delivery (Group A)		Cesarean Delivery (Group B)		p
	No.	%	No.	%	
Missing Tail	12	8.0	58	38.7	<0.001
Excessive Bleeding through os	12	8.0	9	6.0	>0.05
Protrusion of tail outside introitus with IUCD felt in cervix	13	8.7	0	-	<0.001
Only protrusion of tail outside introitus	2	1.3	0	-	>0.05
Pregnancy	0	-	0	-	-
Infection	0	-	0	-	-
Total no. of cases with positive findings	39	26.0	67	44.7	
Total No. of cases	150	100	150	100	-

The cases were carefully examined and it was found that the most common finding in group A was protrusion of tail outside introitus with IUCD felt in cervix in 8.7% of cases followed by excessive bleeding per vaginum and missing tail in 8% of cases each. In group B missing tail was present in 38.7% of cases followed by excessive bleeding through os in 6% of cases. There was no case of protrusion of tail outside introitus in group B. p value was significant for missing tail and protrusion of tail at introitus with IUCD felt in cervix.

Table 4 Distribution of Cases according to Management up to 12Wks follow up

Management	Vaginal Delivery (Group A)		Cesarean Delivery (Group B)	
	No.	%	No.	%
Counseling	40	26.7	77	51.3
Removal	36	24.0	14	9.3
Medical Management	14	9.33	17	11.3
Partial Cutting of tail	2	1.3	0	-
Total no. of cases requiring extra management	78	52.0	91	60.7
Routine follow up Care	150	100	150	100
Total no. of cases	150	100	150	100

The above table disclosed that most common management required in both the groups was counseling with 26.7% of cases in group A and 51.3% of cases in group B. In group A it was followed by removal (24%), medical management (9.3%), string shortening (1.3%). In group B, it was followed by medical management (11.3%) and removal (9.3%). Routine follow up care was given to 100% of cases.

Table 5 Distribution of Cases according to Cause of Removal up to 12 weeks

Cause of Removal	Vaginal Delivery (Group A)		Cesarean Delivery (Group B)	
	No.	%	No.	%
Bleeding PV	12	8.0	9	6.0
Expelled IUCD	13	8.7	0	-
Pain	6	4.0	4	2.7
Next Child	3	2.0	0	-
Sexual dissatisfaction	1	0.7	0	-
Psychosocial	1	0.7	0	-
Sterilization	0	-	1	0.7
Total no. of removal	36	24	14	9.3
Total no. of Cases	150	100	150	100
P	0.010			

According to above table, in group A, expelled IUCD was cause of removal in 8.7% of cases, bleeding PV in 8%, pain 4%, next child 2%, sexual dissatisfaction and psychosocial (0.7% each). In group B, IUCD was removed for bleeding PV in 6% of cases, pain in 2.7% and to be followed by sterilization in 0.7% of cases.

4. Discussion

The post placental insertion of IUCD is a highly effective and easily accessible family planning method that is safe for use by most parturient women.

The purpose of our study is to see the efficacy of post placental IUCD in vaginal and cesarean deliveries and also to have a comparative evaluation of the two groups.

The follow up rate up to 12 weeks was 54.11% in group A almost similar to Recalde et al [3] (43.6%) and 81.78% in group B comparative to Katheit et al [5] (83.4%) due to the fact that operative deliveries have overall better follow up.

The acceptance of PPIUCD in vaginal delivery from Para 2 to Para 5 with slight clustering of cases at Para 2 and Para 3 is observed. In cesarean group maximum acceptance was at Para 2, similar to previous study [5,6,7,8]. This is because there is awareness that family size should be limited or atleast spacing should be done, if there is an operative delivery. At the time of cesarean there is reluctance for permanent family planning method i.e. sterilization, by the family, and obstetrician both due to high perinatal, neonatal and infant mortality rate in India. Cu-380 provides a very good alternative which provides contraception for 10 years and is also reversible as soon as removed.

Our study depicted that up to 12 weeks of follow up incidence of complaints like, pain, bleeding pervaginum, spotting and psychosocial issues were similar in both the groups. However, protrusion of tail at introitus and coital dissatisfaction were only seen in vaginal delivery group in 10% and 0.7% of cases respectively. In cesarean delivery group there were no such cases. Neither of group case complained of per vaginum discharge.

In vaginal delivery group 10% of cases had protrusion of tail outside introitus and 8% of cases had missing tail. Among cesarean delivery group 38.7% of case had missing tail whereas there was no case of protrusion of tail. All these cases were subjected to ultrasonography which revealed that in vaginal delivery group downward displaced IUCDs were found in 8.7% of cases. These downwards displaced IUCDs represented the partially expelled IUCDs in these 8.7% of cases, hence the expulsion rate similar to previous studies [5,9,10], 1.3% of cases had protrusion of tail at introitus but with IUCD in situ. There was no case of expelled IUCD in cesarean group similar to previous studies [12,13].

Bleeding per vaginum was present in 8% of cases in group A and 6% of cases of group B almost similar to previous study [13,15]. There was no case of perforation in both the groups similar to various studies [4,6,7,8]. There was no case of infection during the course of study in contrast to previous studies [2,4,6]

Hence, our study showed that there were no major complications in either group similar to various studies [8,18]. It also revealed that post placental insertion during cesarean section are associated with lower expulsion rates than postplacental vaginal insertion similar to study done by Kapp and Curtis [6] and Gupta et al [9]. Complication rates did not differ by the mode of delivery [11,15]. Apart from the routine care given to all the cases, most of the cases, 26.7% in group A and 51.3% in group B required extra counseling regarding the psychosocial issues or various queries. 9.3% and 11.3% of cases in group A and group B respectively were easily managed with medical treatment and 1.3% of cases in group A required partial cutting of tail.

Our study represented that 24% of cases in group A and 9.3% of cases in group B required or opted for removal. Analysis of the causes of removal disclosed that apart from the removal done in 8.7% cases in vaginal delivery group for partially expelled IUCDs, in vaginal group bleeding per vaginum and pain were the two most common causes for removal with 8% and 4% of cases respectively. Desire of next child, sexual dissatisfaction and psychosocial causes led to removal of IUCD in 2%, 0.7% and 0.7% of cases respectively. In cesarean group although IUCD was removed for bleeding PV and pain in 6% and 2.7% of cases respectively but there was no removal done for next child, sexual dissatisfaction, psychosocial issues and expelled IUCD [8].

Hence through our study it can be inferred that continuation rate in vaginal delivery group was 78% similar to study done by Celen et al [4] and 92% in cesarean group [15], showing a better compliance from the latter group.

5. Conclusion

To conclude post placental IUCD is an effective method of contraception. In area where the situation is of limited access to post-partum care and inability of women to return back for contraceptive measures, the level of programmatic achievement of our study can be considered as success.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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