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COMPARISON OF RESULTS AFTER PPIUCD INSERTION FOLLOWING VAGINAL AND CAESAREAN DELIVERIES

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ABSTRACT

Background: The most economical and reversible type of contraception, the PPIUCD insertion approach, is used across India.

Aim: The present study aimed to comparatively assess the outcomes following the insertion of PPIUCD after caesarean and vaginal delivery.

Methods: The present hospital-based prospective observational study assessed females that delivered either by caesarean section or by vaginal delivery at the Institute within the defined study period along with the insertion of PPIUCD in 2000 females where 1000 females were intra-caesarean PPIUCD insertion and 1000 underwent vaginal insertion. The data gathered were analysed statistically.

Results: 99.4% and 97.6% of females in the intra-caesarean group, respectively, had higher follow-up awareness than those in the vaginal insertion group. Bleeding PV at 6 weeks and 6 months was the main complaint in 8.48% and 4.88% of participants, respectively, and it increased after vaginal PPIUCD implantation. The primary reason for the request to remove the PPIUCD was vaginal haemorrhage, which was more prevalent after vaginal insertion. At 6 weeks and 6 months, the expulsion rate following vaginal PPIUCD insertion was 2.92% and 3.88%, while it was 1.02% and 1.9% following intra-caesarean insertion. At the 6-week and 6-month follow-up, discontinuation rates from spontaneous expulsion and PPIUCD removal were 2.17% and 4.2%, respectively. Nonetheless, 84% of participants kept using PPIUCD as a technique of conception, suggesting increased social acceptance.

Conclusion: According to the current study, PPIUCD is a viable strategy in the field of postpartum facilities. Subjects can become more tolerant of the adverse effects and increase the rate of continuation with appropriate pre- and post-insertion counselling on pain and bleeding. In order to prevent unintended pregnancies, counselling is required for spontaneous PPIUCD ejection, which occurs more frequently following vaginal implantation.

Keywords: caesarean section, caesarean insertion, IUCD, PPIUCD, vaginal insertion

INTRODUCTION

In order for India to meet its commitment to the Millennium Development Goals (MDGs) of reducing maternal and infant mortality and morbidity, family planning initiatives are one of the most important factors. The number of unmet demands during the postpartum period is thought to be rather large. The requirement for family planning is unfulfilled for over 65% of Indian women. Due to their high level of receptivity and motivation to accept family planning treatments, women who give birth at the institute have a great opportunity to get postpartum family planning services.[1]

PPIUCD insertion is a widely acknowledged approach in India. It is among the most economical and reversible conception techniques. A rise in hospital births offers a great chance to sensitize women and offers a successful way of conception. In order to lower the risk of maternal adverse events, increased maternal mortality and morbidity, low birth weight babies, postpartum haemorrhage, premature labor, abortion, and infant and perinatal outcomes like maternal anaemia, it is advised to wait 24 months before attempting a second pregnancy.[2]

In comparison to the normal birth-to-birth gap of around 36 months, over 61% of Indian births take place at shorter intervals. Because it is implanted once and remains in place for over five years without causing any systemic metabolic effects, PPIUCD is a long-term device. The client becomes more tolerant of the short-term and minor adverse effects of PPIUCD, such as bleeding or discomfort, when proper pre- and post-insertion counselling is provided.[3]

Due to variations in the insertion technique, the expulsion rate following vaginal birth is greater than that following an intra-caesarean insertion. The insertion process is different, nevertheless, since the correct positioning of the PPIUCD at the fundus, together with the preservation of aseptic care in the appropriate client selection, might raise the continuation rate and decrease the expulsion rate. Because it is essential for continuance and customer satisfaction, follow-up treatment is required after PPIUCD implantation.[4]

The current study sought to evaluate PPIUCD insertion in two insertion modes—vaginal and intra-caesarean insertion—in order to compare the insertion after caesarean and vaginal delivery in terms of expulsion rate, effectiveness, and safety.

MATERIALS AND METHODS

The current hospital-based observational clinical study was conducted at Department of Obstetrics & Gynaecology, Shri Shankaracharya Institute of Medical Sciences, Bhilai, Chhattisgarh. Prior to the involvement of participants in the study, all individuals gave their written and verbal informed consent.

The trial comprised 2000 participants, 1000 of whom had PPIUCDs inserted vaginally and 1000 of whom had intra-caesarean sections performed at the Institute throughout the study period. Women who were willing to participate in the study and who had given birth and had a PPIUD inserted, either vaginally or by an intra-caesarean section, met the study's inclusion requirements. Subjects having postpartum problems and females who did not provide their agreement to participate in the study were excluded.

Information was collected for each participant from the hospital records once the study patients were finally included. Subjects received post-insertion counselling and were contacted back for follow-up at six weeks and six months, or at any time if they had any complaints or complications. Either in PPOPD or over the phone, follow-up was conducted. Any complaints about thread, vaginal discharge or bleeding, and/or stomach discomfort were solicited from the subjects. The IUCD thread visibility was confirmed by evaluating the subjects who came for PPOPD. Ultrasonography was used to verify that IUCD was positioned correctly in the uterus in situations where the thread was not visible.

After a speculum examination revealed that the thread was too long, it was cut down without being pulled out, and USG verified that the IUCD was positioned correctly. It was suggested that the individuals recollect at six months. Subjects were evaluated clinically and asked about any complaints at the 6-month follow-up. Additionally, subjects were questioned about their satisfaction and desire to keep using IUCD.

Subjects who requested removal were documented, the reason for removal was inquired about, and counselling on the method's continuation was conducted. Subjects were evaluated, and outcomes were compared between two groups based on safety criteria like perforation, irregular bleeding, and atypical vaginal discharge, and effectiveness criteria like cessation, pregnancy, or expulsion.

The collected data was statistically evaluated using the Student t-test, ANOVA (analysis of variance), Chi-square test, and SPSS (Statistical Package for the Social Sciences) software version 24.0 (IBM Corp., Armonk, NY, USA) for evaluating descriptive measures. The findings were presented as frequency, percentages, mean, and standard deviation. Statistical significance was defined as a p-value of less than 0.05.

RESULTS

2000 participants were involved in the trial, and during the designated study period, 1000 females had PPIUCDs inserted vaginally and 1000 underwent intra-caesarean sections at the institute. Women who were willing to participate in the study and who had given birth and had a PPIUD inserted, either vaginally or by an intra-caesarean section, met the study's inclusion requirements. In the current investigation, 2000 female individuals who had PPIUCD insertions—1000 of whom had intra-caesarean insertions and 1000 of whom had vaginal insertions—were evaluated. Table 1 shows that 98.6% (n=986) of the study participants underwent vaginal insertion, whereas 99.4% (n=994) underwent intra-caesarean insertion.

22 patients showed signs of thread coming out when the research participants were distributed according to their complaints at six weeks' recollection with vaginal insertion and There were 14 subjects who had intra-caesarean insertion, 34 subjects who had vaginal insertion, 42 subjects who had intra-caesarean insertion, 42 subjects who had vaginal insertion and 78 subjects who had intra-caesarean insertion, and 76 subjects who had vaginal insertion and 92 subjects who had intra-caesarean insertion, respectively, who experienced bleeding PV. 174 and 226 individuals, respectively, had complaints related to vaginal and intra-caesarean insertion (Table 2).

Regarding the variation in thread showing in study participants at 6-week recall, IUCD was in situ and expulsion was observed in 22 subjects, PIUCD was retained in 730 subjects and expelled in 22 subjects, and thread was observed in 624 subjects and not in 106 subjects during vaginal insertion. 552 participants had the thread visible during intra-caesarean insertion, but 220 subjects with IUCD in situ did not, and 8 subjects had expulsion. Eight participants had PPIUCD ejected, whereas 772 subjects had it kept. A total of 1176 participants had thread, 326 subjects had thread but no thread, and 30 subjects had expulsion and IUCD in situ. A total of 1502 individuals had IUCD retained, whereas 30 PPIUCDs were visible (Table 3).

Regarding thread variability in study participants at 6-week recall, it was observed that 34 expulsions and 620 threads were observed during vaginal insertion, whereas 72 people with IUCD were not observed. A total of 692 PPIUCD were kept, while 34 devices were removed. Threads were visible in 600 patients after intra-caesarean insertion, but not in 528 subjects with in situ IUCD and 52 IUCDs exhibiting ejection. 52 PPIUCDs were evicted and 1628 PPIUCDs were kept overall (Table 4).

DISCUSSION

The trial comprised 2000 participants, 1000 of whom had PPIUCDs inserted vaginally and 1000 of whom had intra-caesarean sections performed at the Institute throughout the study period. In the current investigation, 2000 female individuals who had PPIUCD insertions—1000 of whom had intra-caesarean insertions and 1000 of whom had vaginal insertions—were evaluated. 98.6% (n=986) of the research participants had vaginal insertion, whereas 99.4% (n=994) underwent intra-caesarean insertion.

These findings were similar to those of earlier research by Gupta A et al. (2013) and Celen S et al. (2004), in which the authors evaluated participants using demographic information similar to that of the current study.

According to the study participants' complaints at six weeks' notice, 22 subjects who had vaginal insertion and 14 subjects who had intra-caesarean insertion experienced thread coming out, 34 subjects who had vaginal insertion and 42 subjects who had intra-caesarean insertion experienced vaginal discharge, 42 subjects who had vaginal insertion and 78 subjects who had intra-caesarean insertion experienced abdominal pain, and 76 subjects who had vaginal insertion and 92 subjects who had intra-caesarean insertion, respectively, experienced bleeding PV. There were 226 and 174 patients with complaints of intra-caesarean and vaginal insertion, respectively.

These findings were in line with those of Hooda R et al. (2016) and Mohammed SA et al. (2003), who reported findings that were comparable to the current research regarding complaints at six weeks recall and thread coming out. Regarding the variation in thread showing in study participants at 6-week recall, 624 subjects had thread in vaginal insertion, 106 subjects did not have it, 22 subjects had IUCD in situ and expulsion, and 730 subjects had retained PIUCD and 22 subjects had expulsion. 552 participants had the thread visible during intra-caesarean insertion, whereas 220 subjects did not with IUCD in situ and expulsion was seen in 8 subjectsPPIUCD was ejected from 8 participants and kept in 772 subjects.

An overall number of 1176 participants had the thread, 326 subjects had IUCD in situ, and 30 cases had ejection. A total of 1502 individuals had IUCD retained, whereas 30 PPIUCDs were evicted. These results were consistent with those of Kittur S et al. (2012) and Çelen Ş et al. (2010), whose findings on the variability of displaying thread were comparable to those of the current study. Regarding the evaluation of thread variability in study participants at 6-week recall, it was observed that 34 expulsions and 620 threads were observed during vaginal insertion, whereas 72 people with IUCD were not observed.

A total of 692 PPIUCD were kept, while 34 devices were removed. Threads were visible in 600 patients after intra-caesarean insertion, but not in 528 subjects with in situ IUCD and 52 IUCDs exhibiting ejection. A total of 52 PPIUCDs were evicted and 1628 PPIUCDs were kept. These findings were consistent with those of Welkovic S et al. (2001) and Sood B et al. (2012), who also showed thread variability in study individuals at 6 weeks and 6 months at comparable times to the current investigation.

CONCLUSION

Despite several drawbacks, the current study concludes that PPIUCD is a workable approach in the field of postpartum facilities. Subjects can become more tolerant of the adverse effects and increase the rate of continuation with appropriate pre- and post-insertion counselling on pain and bleeding. In order to prevent unintended pregnancies, counselling is required for spontaneous PPIUCD ejection, which occurs more frequently following vaginal implantation. Furthermore, more research of this kind is necessary.

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TABLES

S. No	Insertion type	Number n (%)	Total
1.	Vaginal insertion	986 (98.6)	1000
2.	Intra-cesarian insertion	994 (99.4)	1000

Table 1: Number of follow-up subjects at 6 weeks recall

S. No	Complaints	Vaginal insertion	Intra-cesarian insertion	Total	p-value
1.	Thread coming out	22	14	36	0.26
2.	Vaginal discharge	34	42	76	
3.	Pain abdomen	42	78	120	
4.	Bleeding P/V	76	92	168	
5.	Total	174	226	400	

Table 2: Distribution of study subjects based on their complaints at 6 weeks of recall

S. No	Categories	Thread seen	Thread not seen (USG performed)		Total retained	Expelled
			IUCD in situ	Expulsion		
1.	Vaginal insertion	624	106	22	730	22
2.	Intra-cesarian insertion	552	220	8	772	8
3.	Total	1176	326	30	1502	30

Table 3: Variability in showing thread in study subjects at 6 weeks recall

S. No	Categories	Thread seen	Thread not seen (USG performed)		Total retained	Expelled
			IUCD in situ	Expulsion		
1.	Vaginal insertion	620	72	34	692	34
2.	Intra-cesarian insertion	600	336	18	936	18
3.	Total	1220	528	52	1628	52

Table 4: Thread variability in study subjects at 6 weeks of recall