OPEN ACCESS

Scholars International Journal of Obstetrics and Gynecology

Abbreviated Key Title: Sch Int J Obstet Gynec
ISSN 2616-8235 (Print) | ISSN 2617-3492 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Original Research Article

Evaluation of Short-Term Complications of PPIUCD

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DOI: 10.36348/sijog.2024.v07i01.004 | **Received:** 10.12.2023 | **Accepted:** 16.01.2024 | **Published:** 20.01.2024

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Abstract

Background: Postpartum intrauterine contraceptives device (PPIUCD) offers an effective means of providing contraceptive services to women in countries with high rates of unmet needs for family planning services. Scientific literature estimating the long-term retention rates is scarce. The complications following PPIUCD insertion at the three follow-up visits. The PPIUCD can be placed immediately following delivery of the placenta, during cesarean section or within 48 hours following childbirth. ***Objectives:*** The aim of the study was to assess the evaluation of short-term complications of Post-Partum Intrauterine Contraceptive Device (PPIUCD). ***Methods:*** This is a prospective observational study was conducted at Department of Obstetrics and Gynecology, Dhaka Medical College Hospital (DMCH). 360 eligible postpartum women were counselled for PPIUCD insertion. These women were also interviewed for their reasons for accepting and rejecting PPIUCD. After consent, Cu-T 380A insertion was done. Follow-up was done at 6 weeks or when reported with any complaint. ***Results:*** PPIUCD implantation was performed on 48 (13.3%) of 360 eligible counseled postpartum patients. Acceptance of PPIUCD was higher in the age range of 25 - 30 years (43.75%), women from middle socioeconomic status (58.3%), those with family support (75%), those who had previously had PPIUCD health counselling (70.8%), and multipara (68.75%). Missing thread (8.3%), lower abdomen pain (6.25%), and irregular per vaginal bleeding (4.2%) were the most prevalent problems. There was 86% continuation of IUCD, 8% discontinuance, 6% expulsion, and no occurrence of unintended pregnancy. ***Conclusion:*** The awareness about availability of PPIUCD is quite low because it is recently introduced in the family planning methods. The most common reason for refusal is disagreement between the husband and his family. Acceptance can be increased further by disseminating information and providing proper counseling in antenatal clinics.

Keywords: IUCD, PPIUCD, Postpartum, Contraception.

INTRODUCTION

Family planning can prevent approximately one-third of maternal fatalities and 10% of child mortality, when couples schedule their pregnancies more than two years apart, [1]. Short intervals between births are associated with increased mother and child mortality and morbidity [2]. Long-term family planning strategies are suggested during this epidemic since the schedule for visiting health facilities is not as frequent as short-term family planning methods. In this scenario, apart from implants, an intrauterine device (IUD) is one of the long-term contraceptive options. Long-term contraceptive

methods such as intrauterine devices and implants have lower pregnancy rates than short-term methods [3]. The benefits of IUD insertion and postpartum implants include their high efficacy and reversibility, as well as their ease of insertion by trained health workers [4]. PPIUD insertion is done ten minutes after the placenta is born until 48 hours postpartum, whereas interval insertion is not connected with delivery. The interval period refers to the placement of the IUD four weeks following delivery. A conventional IUD insertion occurs after 4 weeks postpartum or, more commonly, 6 weeks postpartum. Postpartum IUD insertion is becoming more popular in India [5]. Currently, 68% of women in the developed world use contraception, which is greater than 55% in the developing world. A woman who becomes pregnant too soon after giving birth has an increased risk of anaemia, abortion, early rupture of membranes and maternal death. Despite IUD complications, it remains the most often used method since it has several advantages such as being non-coital, having no systemic complications, lasting a long time, and being reversible with rapid recovery of fertility following removal [6]. IUD problems include heavy menstrual bleeding, irregular menstruation, and infection complications, which can be avoided by utilizing stringent aseptic methods during insertion [7]. IUD displacement is the most distressing complication, especially if it is extra-uterine, because the patient requires a surgical approach (usually endoscopic) to remove the IUD. IUD displacement puts a financial and psychological load on the patient while also raising the risk of unwanted pregnancies and their accompanying risks [8]. The timing of IUD insertion after cesarean section is debatable; some gynecologists insert IUDs during cesarean section after placental removal, while others prefer insertion of IUDs either immediately after puerprium (42 days) or after 6 months post-cesarean section, but the majority inserts IUDs after 3 months [9].

PPIUCD insertion can be done postplacental, or within 10 minutes of placental expulsion, intra caesarean, or within 48 hours of delivery. It is safe to insert an IUCD following a placental delivery. However, there is still disagreement concerning the safety and efficacy of post-placental IUCD implantation because there is a theoretically increased chance of expulsion associated with uterine involution and a higher risk of infection due to lochia. Education and counseling can help boost acceptance and retention of IUCD.

METHODOLOGY

This Prospective observational study was carried out in the Department of Obstetrics and Gynecology, Dhaka Medical College Hospital (DMCH) during July, 2020 to June, 2021. A total of 360 patients were participated in the study. Among them number of 360 women were counselled, among those 48 women agreed for insertion of PPIUCD. Acceptance of PPIUCD among the agreed patients is 13.3%. After taking consent and matching eligibility criteria, data were collected from patients on variables of interest using the predesigned structured questionnaire by interview, observation. Statistical analyses of the results were be obtained by using window-based Microsoft Excel and Statistical Packages for Social Sciences (SPSS-24).

RESULTS

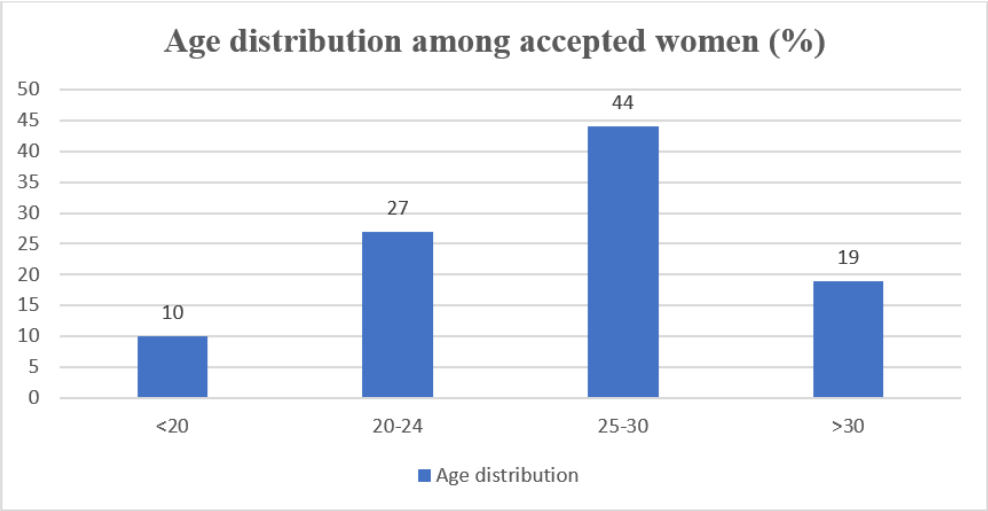

Fig I: Age distribution among accepted women

The mean age of participants was 25.52 years with a standard deviation (SD) of 4.34 years. The majority age group of women who accepted for PPIUCD belonged to the age group of 25 - 30 years which was 43.75% followed by 27.08% in 20-24 years, 18.75 % in ≥30 years.

Table I: Association of Socio-demographic characteristics with the adoption of PPIUCD

Factors	Adopt PPIUCD		P value
	Yes (n=48)	No (n=312)	
Education			
Illiterate	04(6.33%)	64(20.4%)	0.003*
Educated	44(91.6%)	248(79.6%)	
Socio-economic status			
Lower class	08(16.6%)	65(21.1%)	0.002*
Lower middle class	12(25.0%)	145(46.7%)	
Middle class	28(58.3%)	102(32.2%)	
Family support			
Yes	36(75%)	61(19.5%)	<0.001*
No	12(25%)	251(80.4%)	

Chi square (χ^2) was done to analyze the data, *significant, ns= not significant

In the present study highest acceptance was seen in women those with having secondary level of education (60.4%). There was a significant association with education for adopting PPIUCD (P<0.05).

In this study, acceptance rate is more in women coming from middle socioeconomic status (58.3%), those have family support (75%) and having former health counseling about PPIUCD (70.8%).

Table II: Association of Obstetric characteristics with adoption of PPIUCD

Factors	Adopt PPIUCD		P value
	Yes (n=48)	No (n=312)	
Parity			
Primi	15(31.25%)	187(60%)	<0.001*
Multi	33(68.75%)	125(40%)	
Number of children			
1	12(25%)	181(58.1%)	<0.001*
2	15(31.25%)	89(28.5%)	
≥3	21(43.75%)	42(13.4%)	
Mode of delivery			
Vaginal delivery	25(53.08%)	168(53.8%)	0.820^{ns}
Cesarean section	23(47.91%)	144((46.2%)	

Chi square (χ^2) was done to analyze the data, *significant, ns= not significant

There was significant association with parity, desire for future pregnancy and number of alive children with adoption of PPIUCD (P< 0.05). A higher acceptance rate was observed among multipara (68.75%). Those who accepted the method, most of the women (43.75%) had ≥3 number of live children. In this study there was no significant association with mode of delivery for adopting PPIUCD (P> 0.05). Among the accepted group of women, face to face follow up was done in 37 (77%) and phone follow-up was done in 11 (23%).

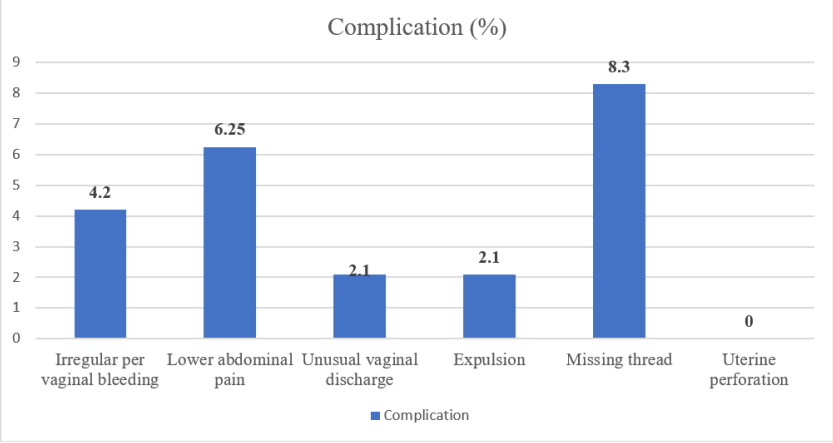

Fig II: Complications among recipients of PPIUCD (n=48)

Out of 48 patients who were followed up after PPIUCD insertion, 11 (22%) patients were developed complications. The commonest complications were missing thread (8.3%) followed by lower abdominal pain (6.25%), irregular per vaginal bleeding (4.2%), unusual vaginal discharge (2.1%) and expulsion (2.1%). No perforation was found among the patients who returned for follow-up.

Table III: Reasons for removal of PPIUCD (n=48)

Reasons	Number (04)	Percent (%)
Irregular per vagina bleeding	02	4.2%
Lower abdominal pain	01	2.1%
Dislike by husband	01	2.1%
Total	04	

Removal of IUCD was done in 04 (8.3%) patients. The causes of removal of PPIUCD were irregular per vaginal bleeding (4.2%) and lower abdominal pain (2.1%). Other reason was dislike by husband (2.1%).

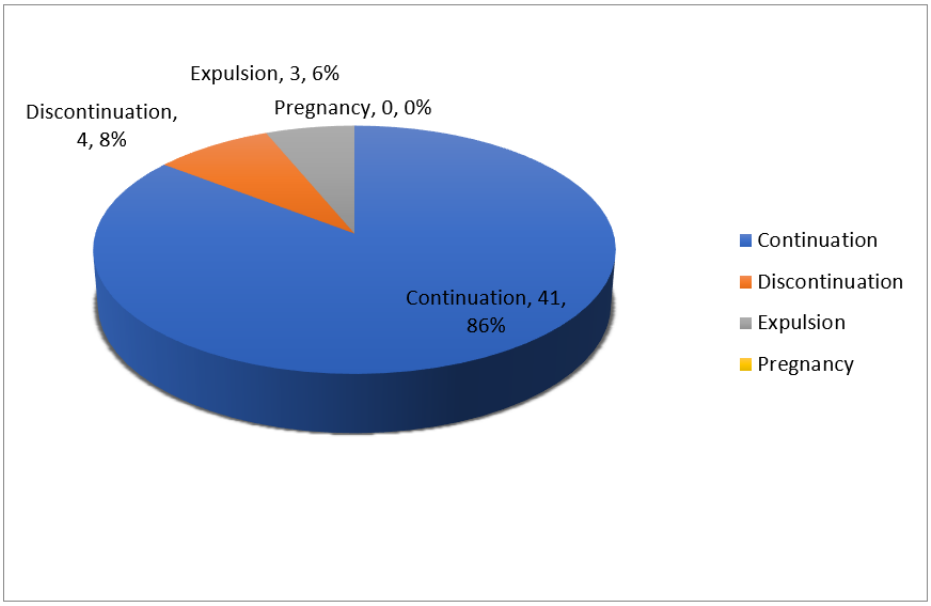

Fig III: Outcome among recipients of PPIUCD

There was continuation of IUCD is 86% where discontinuation is 8%, expulsion is 6% and no case of unplanned pregnancy.

DISCUSSION

Unwanted pregnancy remains a serious issue in our country. To promote mother and child health, family planning procedures must be strengthened in order to attain limited family size. The community's high use of contraception can minimize the likelihood of maternal mortality. Contraception use, in addition to preventing unplanned births, contributes to the achievement of the 5th Millennium Development Goal, namely enhancing maternal health [10]. The intrauterine contraceptive device (IUD) is generally accepted and used method of contraception since it is safe, inexpensive, long acting, and reversible. Furthermore, IUD-related difficulties can be avoided by using aseptic approach and a correct way of insertion [11].

In this given study, the highest acceptance was seen in women in the age group ranging from 25-30 years (43.75%), women coming from middle socioeconomic status (58.3%). These findings are consistent with those obtained by Kanhere AV *et al.*, and Sharma A *et al.*, [12] This finding demonstrates that education has a favorable impact on women's willingness to embrace PPIUCD use, including FP utilization.

It might also be stated that during ANC visits, health care providers cleared any misconceptions concerning the usage of PPIUCD. As a result, delivering effective contraceptive counseling during ANC visits could resolve any misunderstandings and inspire women to accept PPIUCD use soon following delivery. According to Safwat *et al.*, family support (75%) has a role in PPIUCD acceptability [13]. In Egypt, many women were denied PPIUCD because their partners were unwilling. This demonstrates the significance of partner and family involvement in therapy and decision making.

Fear of complication, interference with sexual intercourse, and spouse reluctance were among the criticisms leveled at the approach. According to Sharma *et al.,* Mishra and Gautam *et al.,* the biggest reason for non-acceptance (Table.2) was fear of complications (32.4%) and preferred other methods (22.7%), refusal by husband (19.2%). This implies that health care providers should recognize the significance of couple counseling in contraception decision making. To improve compliance, couples counseling should take a gender-sensitive approach.

The present study showed that, out of 48 patients who were followed up after PPIUCD insertion, 11 (22%) patients were developed complications. Missing thread (8.3%), lower abdomen pain (6.25%), irregular per vaginal bleeding (4.2%), unusual vaginal discharge (2.1%) and expulsion (2.1%) were the most prevalent problems. There was no perforation among the patients who returned for follow-up. These findings are consistent with the findings of Kanhere AV *et al.,* [12].

IUCD removal was performed on four patients (8.3%). The most common reasons for PPIUCD removal were irregular per vaginal bleeding (4.2%) and lower stomach pain (2.1%). Another factor was husband disapproval (2.1%). Mishra *et al.,* observed similar observations, where bleeding was the most common reason for removal [14]. In contrast, Goswami *et al.,* found that the main reason for IUCD removal was pressure from the husband and other family members [15].

CONCLUSION

In both cesarean and vaginal deliveries, IUCD insertion in the immediate postpartum period is an effective, safe, and convenient contraceptive intervention. However, acceptance of immediate PPIUCD use remained low. This could be linked primarily to low educational attainment, perceived anxiety, and fears of difficulties associated with IUCD insertion. The rejection of the male partner also plays a significant influence in the use of postpartum IUCD. Acceptance of immediate PPIUCD use was associated with completion of secondary school and attendance at antenatal care visits before to current birth. As a result, during antenatal care visits, special focus should be paid to correcting misconceptions and anxieties concerning PPIUCD insertion complications.

Limitation of the study:

There were a number of limitations of this study, which includes: i) Sample size was not representative to generalized the findings ii) The study sample were recruited from one tertiary care hospital; therefore, it may not be representative to the all over country.

RECOMMENDATION

Further study involving large sample size in multicenter is required to reach a definitive conclusion. Female empowerment should be encouraged which will increase their decision-making power about limitation of family. It is also important to train up the doctors, midwifes and other health care providers about the knowledge and skills of insertion of PPIUCD and follow up. Follow up of the patients should also be increased, so that more information about the complications and safety can be collected.

ACKNOWLEDGEMENTS

The wide range of disciplines involved in evaluation of short-term complications of Post-Partum Intrauterine Contraceptive Device (PPIUCD) research means that editors need much assistance from referees in the evaluation of papers submitted for publication. I would also like to be grateful to my colleagues and family who supported me and offered deep insight into the study.

DECLARATION

Funding: None funding sources.

Conflict of interest: None declared.

Ethical approval: The study was approved by the ethical committee of Dhaka Medical College Hospital, Dhaka, Bangladesh.

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