

Status of Postpartum Intra Uterine Contraceptive Device in a Tertiary Care Hospital in Dhaka

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Abstract

Background: Timing of insertion, counseling, provider training and institutional support are critical factors for intrauterine contraceptive devices (IUCD) use during the postpartum period. **Objective:** The objective of the study was to determine the rate of acceptance, discontinuation, expulsion, infection and displacement of PPIUCD after vaginal delivery and cesarean section along with other complications among the study population. **Methodology:** This was a prospective observational study done in Shaheed Suhrawardy Medical College and Hospital from July 2015 to June 2016 among the pregnant women who delivered healthy baby by normal vaginal delivery and cesarean section. Data was collected by a structured questionnaire. Women who gave informed consent and who gave birth of healthy baby without complications were included. Women who had premature ruptured membrane with chorioamnionitis, pelvic inflammatory disease intrauterine fetal death or who did not give consent were excluded. **Result:** In this study, only 8.4% gave consent for this method, 77.1% had regular follow up after this method. Only 5.05% had removal and 1.8% had spontaneous expulsion. 10.5% had lower abdominal pain and 4.13% had per vaginal bleeding after this method. **Conclusion:** This study showed that post-partum intrauterine contraceptive devices insertion rate is low even in a tertiary center, which means, there is a lot of space for counseling the target population in our country. On the contrary, follow up rate was quite high which means that people are being concerned about this health care service. Similarly, the removal rate was also satisfying with minimum expulsion rate. [Journal of National Institute of Neurosciences Bangladesh, July 2021;7(2):165-168]

Keywords: Status; Postpartum; Intra Uterine Contraceptive Device

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Introduction

Postpartum contraception is important to prevent unwanted pregnancy and short birth intervals, which can lead to negative health outcomes for mother and child¹. The choice of postpartum contraceptive method depends on many factors, including the need for temporary versus a permanent method, the infant feeding choice and the extent to which informed consent is made prior to delivery. Immediate postpartum long acting reversible

contraception has the potential to reduce unintended and short interval pregnancy². The American college of Obstetrician and Gynecologists recommends that optimally women should be counseled prenatally³. Counseling should include advantages, risk of expulsion, contraindications⁴. Institution should develop resources, processes and infrastructure to support post-partum intrauterine contraceptive device after vaginal and cesarean births. In a study of postpartum unintended pregnancies, 86.0% resulted from nonuse of

contraception and 88.0% ended in induced abortion⁵. Postpartum period starts immediately after delivery of placenta up to 42 days⁶. For better understanding, this period has been subdivided in three phases - post placental period up to 10 min from delivery of placenta, immediate postpartum period from 10 minutes of placental delivery up to 48 hours and late postpartum period from 48 hours up to 42 days of delivery⁷.

In this study, IUCD was given in post placental and immediate postpartum period. Postpartum IUCD was not given and recommended in late postpartum period for its increased risk of expulsion and infection⁸. During postpartum time, women are often highly motivated to initiate contraceptive use. IUCD insertion during this time period, is an ideal method for some women as it does not interfere with breastfeeding, is convenient for women, associated with less discomfort and fewer side effects and allows women to obtain safe, long acting and highly effective contraception. The objective of the study was to determine the rate of acceptance, discontinuation, expulsion, infection and displacement of PPIUCD after vaginal delivery and cesarean section along with other complications among the study population.

Methodology

This was a hospital based prospective observational study done from July 2015 to June 2016 in Shaheed Suhrawardy Medical College and Hospital, Dhaka among women who delivered healthy living baby by normal vaginal delivery and cesarean section. Data were collected from participants using a structured questionnaire that included basic demographic information, perception of family planning, satisfaction with PPIUCD counseling and with the method itself. After 6 weeks, PPIUCD clients were again interviewed using a structured follow up questionnaire that was used to collect information about the client's overall satisfaction with the method, problems or complications related to the method and confirmation of retention of the IUCD in situ. The follow up interview was generally conducted at the same health facility where the client had received the PPIUCD. In the follow up, physical examination, ultrasonogram of lower abdomen and other investigations (according to patient's complaints) were done. In cases, where the client did not return for her follow up, she was conducted over telephone for follow up. Women who delivered a healthy baby vaginally and by cesarean section and who gave consent for IUCD insertion were included in the study. Women who have delivered before or more than 48 hours and who had intrauterine fetal death, with

choreoamnionitis, history ruptured membrane more than 18 hours prior to delivery, women with heart disease, haemorrhagic disorder, liver disease, PID, STDs, primary PPH, Uterine abnormalities like bicornuate uterus, septate uterus, fibroid uterus and who did not give consent, were excluded from the study. Analyses were performed with SPSS software, versions 22.0 (IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.). Continuous data that were normally distributed were summarized in terms of the mean, standard deviation, median, minimum, maximum and number of observations. Skewed data were presented in terms of the maximum, upper quartile, median, lower quartile, minimum and number of observations. Categorical or discrete data were summarized in terms of frequency counts and percentages. For end points analysis, Chi-square test corrected by Fisher's exact test was used for categorical variables and an analysis of variance (Student t Test) for continuous variables.

Results

A total number of 2592 women were recruited for this study who delivered healthy living baby by normal vaginal delivery and cesarean section. Insertion rate is only 8.41% cases. This means more emphasis should be given to popularize this method and counseling (Table 1).

Table 1: Insertion rate among the study population

Total Number of population (N)	Number of insertion (n)	Insertion Rate
2592	218	8.41%

Follow up rate was 77.1%(n=218) which was given by face to face interview, ultrasonogram of lower abdomen and over telephone where the patient was not physically present. 22.9% patients did not have follow up (Table 2).

Table 2: Follow up rate among the PPIUCD inserted group (n)

Total insertion(n)	Follow up	Without follow up
218	168(77.1%)	50(22.9%)

Removal rate is 5.05% and expulsion rate is 1.83% only. Removal was needed for patient's complaints like lower abdominal pain, excessive vaginal discharge, and discomfort (Table 3).

Rate of PPIUCD insertion was higher after cesarean section than normal vaginal delivery. Expulsion rate is

less after cesarean section (0.46% only) with significant P value (Table 4).

Table 3: Removal and expulsion of PPIUCD among the inserted group

PPIUCD	Frequency	Percent
Removal	11	5.05
Expulsion	4	1.83
Total	218	

Table 4: PPIUCD insertion after normal vaginal delivery and cesarean section

PPIUCD	Mode of delivery		P value
	NVD	CS	
Insertion	35(16.1%)	183(83.94%)	
Removal	2(0.9%)	9(4.13%)	0.05
Expulsion	3(1.37%)	1(0.46%)	

NVD=Normal vaginal delivery; CS= Cesarean section

Only 10.5% had lower abdominal pain and only 4.13% had per vaginal bleeding which indicates very low incidence of complications. 83.08% had no complaints at all (Table 5).

Table 5: Complications among the Inserted Group (n=37)

Name of Complications	Frequency	Percent
Lower Abdominal Pain	23	10.5
Pervaginal Bleeding	9	4.1
Pervaginal Discharge	5	2.3
Total	37	16.9

Discussion

The objective of this study was to determine the acceptance rate for post-partum intrauterine contraceptive devices (PPIUCD), the factors associated with the acceptance of PPIUCD and the rate of discontinuation, expulsion and complications. In this study, postpartum intrauterine contraceptive device insertion after normal vaginal delivery and cesarean section, follow up for 6 months, its removal, expulsion and complications were analyzed. It was found that rate of expulsion is more in insertion after normal vaginal delivery that cesarean section but removal rate is higher after cesarean sections. Though it is a good contraceptive method with no hormonal side effects, it was accepted by only 8.41% patients. The main reasons behind this is myth and misconception about this method. Another important cause is lack of power to take decision among the study population and lack of education in this group. In a study, in developing countries, the large majority of women do not want to

have another child within their first year postpartum, yet less than 37.0% cases are using a family planning method⁸. Family planning can avert nearly one third of maternal deaths and 10% of child mortality when couples space their pregnancies more than two years apart. In a study from Orissa, India, about three quarters of the clients were satisfied with the method⁸. In this study, only 10.5% complained of lower abdominal pain, 4.13% complained of pervaginal bleeding and only 2.29% complained of pervaginal discharge.

Adreien et al⁹ stated that, the prevalence for PPIUCD use was 28.1% cases. In another study, Patnaik and Mishra¹⁰ showed that, the acceptance rate was 39%with the expulsion rate of 18% and removal rate was 13% which was quite high.

In this study, removal rate after normal vaginal delivery is 0.9% and after cesarean section is 4.13%. Expulsion rate is 1.37% after vaginal delivery and 0.46% after cesarean section which is similar to a study done in Hubly, Karnataka which was 1.6% and 0.6% respectively¹¹. In a study done in Paraguay, it was 1.06% and 1.03% respectively¹². Women most commonly reported expected side effects of IUCD as the reason for the removal including bleeding and abdominal pain. These findings suggest that there is a room for strengthening PPIUCD counseling services particularly regarding normal side effects and complications that arise from this method. Present study is limited in that long term expulsion rates could not be determined since follow up was only conducted at six weeks following birth. More studies are needed to assess the effects of PPIUCD on continuation and birth spacing in future.

In Bangladesh, unmet need of family planning is 13.5% (BDHS 2011). Postpartum intrauterine contraceptive method is a strong weapon in the family planning sector and should be encouraged in both vaginal and cesarean deliveries. Women who received PPIUCD show a significant level of satisfaction with this choice of contraception and the rate of expulsion were low enough. Such the benefits of this method outweigh the complications that arise from this method.

Conclusion

This study showed that PPIUCD insertion rate is low even in a tertiary center, which means, there is a lot of space for counseling the target population in our country. On the contrary, follow up rate is quite high which means that people are being concerned about this health care service. Similarly, the removal rate is also satisfying with minimum expulsion rate. So, people will accept this postpartum contraceptive

method as it has minimum side effects, if the proper counseling can be provided to the target population. It is the time to take proper initiative to popularize this method among the general population. Health service providers along with government and nongovernment organizations should come forward in this field.

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