

# Women's Experience with Postpartum Intrauterine Contraceptive Device

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## Abstract

**Objective:** To evaluate women's experience in terms of safety and satisfaction of women using postpartum intrauterine contraceptive device.

**Methodology:** This descriptive study was carried out in a tertiary care hospital over a period of 5 years. Pregnant women of all age groups and parity, whether delivered vaginally or via caesarean section, that fulfilled inclusion criteria and gave consent for postpartum IUCD insertion were included in the study. Patients were counseled during the antenatal and intrapartum period. Study participants were followed till six weeks postpartum. Data was analyzed using SPSS version 23. Qualitative variables were calculated using percent, while quantitative variables used the mean and standard deviation.

**Results:** The total number of women who opted for postpartum IUCD insertion was 366. In 222(60.7%) cases IUCD was inserted during caesarean section while in 144(39.3%) IUCD was inserted after vaginal delivery. More than half of study participants i.e. 197(53.8%) did not have any subjective complaint. Most common side effect reported by study participants are menstrual irregularity in 30.1%( 110) women, lower abdominal cramps in 11.2 % ( 41), lower genital tract infection in 1.6 % ( 6) women. Three hundred and twenty (87.4%) study participants are satisfied with PPIUCD as contraceptive method; want to continue as well as willing to suggest its use to their relatives and friends. While 12.6% (46) discontinued within 6 weeks of follow up. In the current study, reasons of discontinuation of PPIUCD were vaginal bleeding in 40(87%) and expulsion of PPIUCD in 6 (13%) cases.

**Conclusion:** Postpartum IUCD is a safe method of long-term contraception with high satisfaction rate.

**Keywords:** Contraception, IUCD, Postpartum, PPIUCD

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## Introduction

The total fertility rate in Pakistan is 3.6 births per woman. Mothers living in rural areas on average bear one more child than mothers in urban areas. Thirty-seven percent of births occur within 24 months of the preceding birth. Median birth interval among women age 15-19 years is 19.7 months.<sup>1,2</sup>

Use of modern methods of contraception by married women has stagnated over the last 5 years, with 26% of women using a modern method in 2012-13 and 25% in 2017-18. Fifty-two percent of currently married women in Pakistan have a demand for family planning; 19% for spacing births, and 33% for limiting births. Only 34% of currently married women are using a contraceptive method either to space or to limit births however while

17% of currently married women have an unmet need for family planning. 10% want to space and 8% desire to limit births but are currently not using any contraception. Only 19% of women are informed about all three quality-of-service indicators i.e. side-effects, what to do in case of side effects, and about alternative methods.<sup>2</sup>

Intrauterine contraceptive device (IUCD) is a widely used contraceptive method. It provides long term reversible contraception with immediate return to fertility on removal. It does not interfere with intercourse and can be used by lactating mothers.<sup>3</sup>

Insertion of IUCD during postpartum period is a safe and feasible innovation. IUCD insertion within 10minutes after removal of placenta is called post placental

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insertion. IUCD insertion after 10 minutes of placental removal till first 48 hours postpartum is called immediate postpartum insertion. Placement of IUCD during caesarean section is called trans-caesarean or intra-caesarean IUCD insertion. It is safe, effective, convenient, low cost, long-term reversible contraception. Complications are comparable with interval IUCD insertion.<sup>4,5</sup> It may be associated with heavy menstrual bleeding, vaginal discharge and lower abdominal pain during first few months of insertion. It may be expelled or misplaced. It does not provide protection against sexually transmitted infections.<sup>5</sup>

The objective of this study was to evaluate women's experience in terms of safety and satisfaction of women using postpartum intrauterine contraceptive device. Very few studies have been conducted in Pakistan to evaluate satisfaction of users of PPIUCD. It would provide data regarding complications experienced by study population as well as satisfaction rate among PPIUCD users in local context.

## Methodology

This descriptive study was carried out in Gynae and Obstetrics Department of Sharif Medical and Dental College, Lahore, over a period of 5 years from June 2016 to May 2021. Approval was obtained from institutional ethical review Committee letter No. SMRC/27.

The study included pregnant women of all ages and parities who gave consent for postpartum IUCD insertion, whether delivered vaginally or via caesarean section. While women with uterine abnormalities, fibroid uterus distorting uterine cavity, active Pelvic infection, ante-partum or intra-partum haemorrhage, prolonged rupture of membranes > 24 hours, prolonged labour > 24 hours, chorioamnionitis, maternal fever (100 °F) during labour or delivery, manual removal of placenta, and extensive genital tract trauma were excluded from study. Sample size was 366 based on 39% acceptance for PPIUCD; taking confidence interval 95% with a significant difference of 0.05. The convenience sampling technique was used.

Patients were counseled during antenatal and intrapartum period. All patients who fulfilled inclusion criteria were included in the study after written consent. Women who delivered through vaginal route, after delivery of placenta, a bimanual examination was performed to ensure that uterus is contracted. Intrauterine contraceptive device was placed in uterine fundus under aseptic measures using Kelly's

forceps within first 48 hours. Patients who delivered via caesarean section, IUCD was placed in uterine fundus through a lower uterine transverse incision after removal of placenta.

Study variables included demographic characteristics such as age, parity, education of couples, and their monthly income. It was also inquired whether study participants have heard about postpartum IUCD previously, and which method of contraception they used previously. The safety of postpartum IUCD was assessed based on complications like vaginal bleeding, lower abdominal pain, infection, expulsion of IUCD, uterine perforation, IUCD displacement. Satisfaction regarding postpartum IUCD was evaluated based on willingness to continue using PPIUCD, and suggestion of its use to her relatives or friends. The users who want to discontinue PPIUCD, reason of discontinuation was noted.

All patients were reviewed at discharge and were followed up till 6 weeks postpartum. At follow up, speculum examination of every patient was done to visualize the cervix and IUCD string. Moreover, a pelvic ultrasound was performed to confirm that IUCD is present inside the uterine cavity. Findings were noted on structured proforma.

Data was analyzed using SPSS version 23. Demographic features of all participants, like age, and parity, were measured using the mean and standard deviation. Education of couples, occupation of study participants, whether study participants have heard about postpartum IUCD previously, the method of contraception they used previously, complications like vaginal bleeding, lower abdominal pain, infection, expulsion of IUCD, uterine perforation, IUCD displacement, willingness to continue using PPIUCD etc. were calculated using frequency and percentage.

## Results

The total number of women who opted for postpartum IUCD insertion was 366. In 222(60.7%) women, IUCD was inserted during a caesarean section, while in 144(39.3%) women IUCD was inserted after vaginal delivery. Mean age of the women was 27.32±4.01 ranging from 20-40 years. Mean parity of women were 2.8±1.06 ranging from para one to para 7. Demographic and obstetric variables of study participants are shown in table I.

Most of the study participants were literate, as shown in figure I. The majority of the PPIUCD users were

satisfied, as shown in figure II. The major reason of discontinuation was menstrual problems was seen in vaginal bleeding 40(87%) and 6(13%) in expulsion.

<b>Table I: Women's Experience with Postpartum Intrauterine Contraceptive Device</b>			
<b>Variables</b>		<b>(N)</b>	<b>%</b>
<b>Age</b>	18-25	135	36.9
	<b>26-30</b>	<b>121</b>	<b>53.8</b>
	31-35	97	05.7
	36-40	13	03.6
<b>Parity</b>	Primipara	24	6.6
	<b>Multipara</b>	<b>316</b>	<b>86.3</b>
	Grand multipara	26	7.1
<b>Occupation</b>	<b>House wives</b>	<b>350</b>	<b>95.6</b>
	Working women	16	04.4
<b>Monthly income</b>	<b>25,000</b>	<b>201</b>	<b>54.9</b>
	>25,000-50,000	84	22.9
	>50,000-75,000	49	13.4
	>75,000-100,000	23	06.3
	>100,000	09	02.5
Previous method of contraception	<b>Male Condom</b>	<b>107</b>	<b>29.2</b>
	COCP	26	7.1
	Depot injections	24	6.6
	Interval IUCD	21	5.7
	Natural	99	27
Future pregnancy desire	No intention	108	29.5
	1-2 years	12	3.3
	<b>3-5 years</b>	<b>155</b>	<b>42.3</b>
	>5years	47	12.8
	Not sure	44	12.0
Heard about PPIUCD previously	Yes	127	34.7
	No	239	65.3
Complications	<b>Menstrual problems</b>	<b>110</b>	<b>30.1</b>
	Lower abdominal pain	41	11.2
	Lower genital tract infection	12	3.3
	Expulsion of PPIUCD	6	1.6
	No complication	197	53.8
6 week follow up	IUCD string visualized	233	63.8
	IUCD string not visualized but on pelvic USG IUCD insitu	127	34.7
	IUCD not visualized on pelvic USG	6	1.6

## Discussion

The mean age of study participants was 27.32±4.0 ranging from 20-40 years. Most of the couples were literate, with 91% females and 94.6% male partners having different levels of education ranging from primary to master's level. Approximately one third i.e. 34.7(127)

had previously heard about IUCD insertion in immediate postpartum period while more than half of the patients i.e. 54% had heard about PPIUCD in a study by Kumar S.<sup>4</sup>

More than half of the study participants i.e. 197(53.8%) did not have any subjective complaint. Most common side effect reported by study participants are menstrual irregularity in 30.1%(110) women, lower abdominal cramps in 11.2 % ( 41), lower genital tract infection in 1.6 % ( 6) women. Secondary postpartum haemorrhage was reported in 3.9%(14), lower genital tract infection in 2.1%(7), menstrual problems IUCD in 4.2%(15), displaced IUCD in 1(0.005) cases.<sup>6</sup> It was observed in a multicenter study revealed that 78%(1344) women did not experienced any complications while abdominal pain in 8%(138), menstrual problems in 5%(82), pelvic infection in 5%(91) cases.

PPIUCD expulsion rate was 3.3 % ( 12) in current study comparable to expulsion rate of 3.6% observed in a study conducted on Indian women. Experience of postpartum insertion of IUCD from six developing countries of the world in terms of expulsion rate was 3.7% in Pakistan, 3.6% in Ethiopia and 1.7% in Philippines and Guinea.<sup>7</sup> Similar findings i.e. 5% were seen in a study by Anjum et al.<sup>4</sup>

Three hundred and twenty (87.4%) study participants are satisfied with PPIUCD as contraceptive method; want to continue as well willing to suggest its use to their family and friends. While 12.6% (46) discontinued within 6 weeks of follow up. A study by Kumar s revealed that 92% women were satisfied by using PPIUCD while 95% women in a study conducted by Iftikhar et al. The continuation rates were 90% at 6 weeks by Anjum et al.

In current study reasons of discontinuation of PPIUCD were vaginal bleeding in 40(87%) patients and expulsion of PPIUCD in 6 (13%). Abdominal discomfort and dissatisfaction were the major reason of removal of PPIUCD in 2.9%.<sup>6</sup>

According to the literature, the expulsion rate in women with IUCD insertion in the postpartum period is higher than in women without IUCD insertion, i.e., 4.3% versus 2%. However, request for removal of IUCD was almost similar in both groups i.e. 5.6 versus 6%. The comparison of menstrual problems as a cause of removal discontinuation of was lower (23.5%) in case of PPIUCD versus interval IUCD (88.5%).<sup>5</sup>

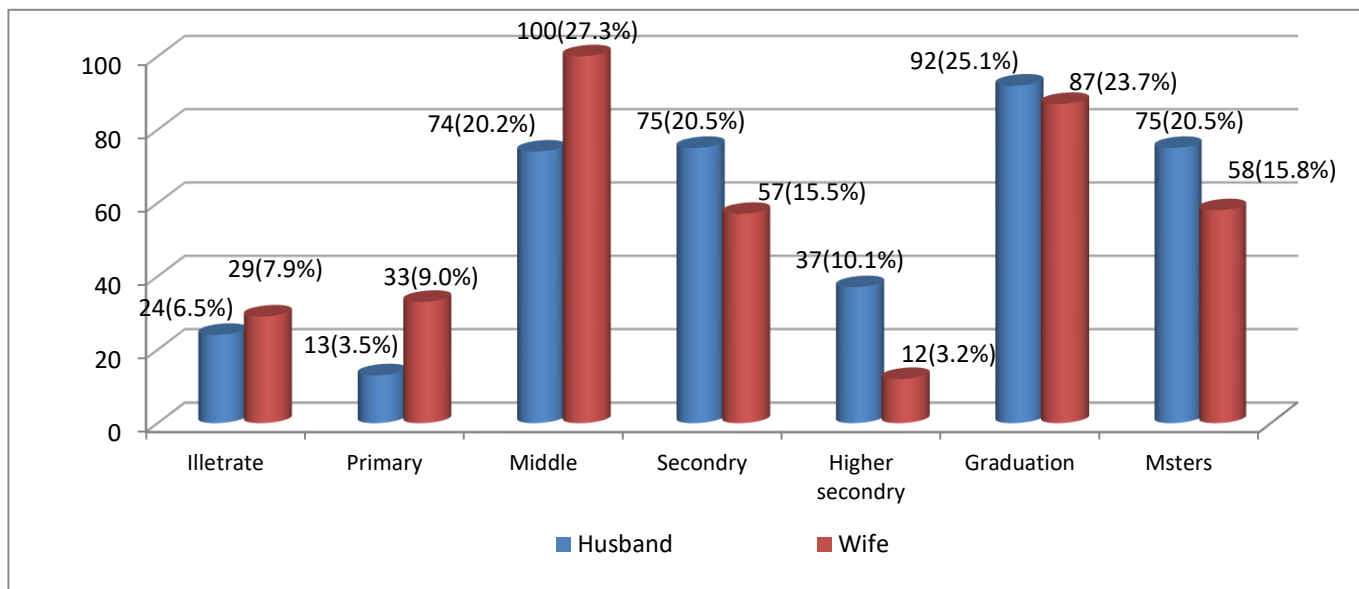


Figure I: Education of couples.

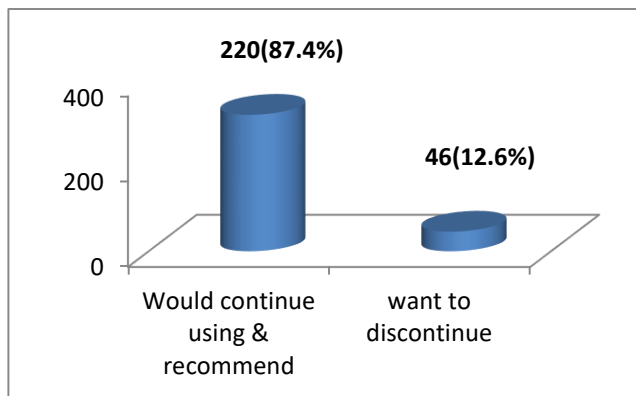


Figure II: Women satisfaction with PPIUCD.

Most of the women are multipara. Most common of contraceptive method used previously by the couples was male condom by 107 (29.2%) male partners of the women included in study. Natural methods was 2<sup>nd</sup> common method used by 99(27%) Most common method of contraception used in past were Male condoms and IUCD.<sup>4</sup> Two hundred and fourteen (58.4%) women expressed their intention for future pregnancy, out of which Majority of women i.e.155 (42.3%) has future pregnancy plan within 3-5 years. While 108(29.5%) are had no future intention of pregnancy. 54% wanted to have more children.<sup>4</sup>

Acceptance for postpartum family planning is not satisfactory in developing world.<sup>8</sup> Reasons of non-acceptance of PPIUCD must be identified and addressed. Author conducted another study to identify the reasons of refusal of PPIUCD and found that most of the women had fear of complications so they don't want PPIUCD insertion during puerperium.<sup>9</sup> A study

conducted in India found that common myths regarding postpartum insertion of IUCD were fear of malignancy, and heavy menstrual bleeding.<sup>10</sup>

Factors which play a part in improving the acceptance for PPIUCD include; counseling of women, spouse and accompanying family members in antenatal clinics, antenatal and postnatal wards, ensuring continuous supply of IUCDs and provision of training to doctors.<sup>11</sup> Literature reveals that PPIUCD uptake was six times more in women who received focused counseling for PPIUCD as compare to the other group of women.<sup>12</sup> Similarly another research conducted by PPIUCD success rate was high in women who were counseled during antenatal, and intrapartum period as compared to women who were counseled either in antepartum, intrapartum or immediate postpartum period.<sup>13</sup>

Furthermore country wise free training and monitoring, provision of support to the trained staff and supervision of new trainees to develop sufficiently skilled personnel, master trainers, community health workers. Monitoring of outcome in terms of satisfaction, and safety is nessary.<sup>14</sup> Sociocultural concerns, myths and misbelieves about postpartum family planning must be addressed.<sup>15</sup>

It's been reviewed that there is a changing trend of contraception with introduction of PPIUCD. It provides long-term contraception and eliminates the need of revisit to family planning centers. So it is feasible in low resource countries to address the unmet need of contraception.<sup>16</sup> In short postpartum contraception is an opportunity that should not be missed.

## Conclusion

Postpartum IUCD is a safe method of long-term contraception with high satisfaction rate. Most common reported complication is “menstrual problems” and it was also the major reason for discontinuation of Postpartum Intrauterine Contraceptive Device. Expulsion of PPIUCD is another significant concern for its users.

### Strengths and Limitations

It is a single centered study that was conducted over a period of five years that explored women experience as well as their satisfaction for PPIUCD.

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