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ORIGINAL ARTICLE

Efficacy and Safety of Immediate Postpartum Intrauterine Contraceptive Devices in C-Section and Vaginal Deliveries

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ABSTRACT

Aim: To determine the safety and efficacy of immediate postpartum intrauterine contraceptive devices insertion after vaginal and caesarean and vaginal deliveries.

Study Design: Retrospective study

Place & Duration: Conducted at Gyne & Obs Department, Shahida Islam Teaching Hospital Lodhran, during from 1-06-2020 to 30-06-2021.

Methods: In this study 120 patients were included in this study. Patients' ages were ranging from 20 to 45 years. Patients' detailed medical history including age, residence and socioeconomic status were examined after taking written consent. All the patients divided into two groups, 60 caesarean, 60 vaginal. IPPIUCDs were inserted in all the patients. Outcomes were examined at follow-up and compared between both groups. Data was analyzed by SPSS 24.0. P-value <0.05 was considered as significant.

Results: 48 (40%) patients had ages between 20 to 30 years, 56 (46.7%) patients had ages 31 to 40 years and 16 (13.3%) patients had ages above 40 years. Complications rate was low. Perforation and pregnancy rate was 0%. Menstrual disturbance reported in 20 (16.7%) which was significantly higher in vaginal group. Expulsion rate was 9 (7.5%) and significant higher in vaginal group p<0.05. Removal was done in 14 (11.7%) cases and rate of removal of IUCD was high in vaginal group. Continuation rate at follow-up was 106 (88.3%).

Conclusion: It is concluded that the insertion of immediate postpartum intrauterine contraceptive devices was effective and safe method with low complications rate.

INTRODUCTION

Pakistan is the world's 6th most populated country. The number of people in a country is inversely linked to its rate of economic growth. The less people there are, the more resources there are available for improving living standards and developing the country. A worldwide birth rate control is not only debated at the highest levels, but tangible actions are also being implemented at the country level to maintain birth rates. [1] Pakistan is working to establish a platform for the promotion and effective use of contraception in order to meet the Sustainable Development Goals (SDGs) by 2030 and promote prosperity for all. In 2012, significant efforts to improve family planning were made. [2,3] Government of Pakistan has created a comprehensive plain for family planning with the assistance of provisional governments to include preparation of contraceptives and training of mid-level service providers in the private and public sectors to deliver intrauterine contraceptive devices and implants. As part of social mobilization, males and religious experts are also being enlisted to help raise social acceptance of family planning. The World Health Organization (WHO) recommends the immediate insertion of an intrauterine contraceptive device (IUCD) as a safe and effective means of temporary contraception [5]. All women who are breastfeeding can safely use the postpartum intracontraceptive uterine device (PPIUCD) to prevent pregnancy. Between 39% and 65% of women in the first year after giving birth have unmet family planning needs [5-7]. Providing contraception during this vulnerable time is so critical. As a cost-effective, reversible, and convenient method of contraception that minimizes the number of abortions, PPIUCD is recommended.

Many unintended pregnancies occur in the first year after giving birth because women resume sexual activity too soon, and ovulation occurs at an uncertain time. Furthermore, particularly in developing countries, women who return home after giving birth do not even return for a standard postpartum check-up, let alone contraceptive methods of contraception. The importance of postpartum family planning services, where a woman is discharged from the hospital with access to contraception, should be highlighted. In-patient deliveries give an exceptional chance to provide postpartum women with a long-acting yet reversible method of contraception. Long-acting reversible contraceptive insertions have been shown in Cochrane reviews to be safe and feasible in many circumstances [8-9].

When women in low-resource settings give birth in a facility, they are less likely to return for further care, making it an ideal moment to start family planning. Long-acting reversible contraceptives like the PPIUCD encourage women to give birth in a hospital [11, 12] since it is effective. In the postpartum period, LARC offers various advantages due to its effectiveness, coitus independence, and non-interference with breast-feeding.

The purpose of this study aimed to examine the safety and efficacy of immediate postpartum intrauterine

contraceptive devices insertion after vaginal and caesarean and vaginal deliveries.

METHODS

This retrospective study was conducted at Gyne & Obs Department, Shahida Islam Teaching Hospital Lodhran, during from 1-06-2020 to 30-06-2021. In this study total 120 patients were included. Patients ages were ranging from 20 to 45 years. Patients detailed medical history including age, residence, socioeconomic status were examined after taking written consent. Women with acute purulent discharge, high individual likelihood of exposure to gonorrhoea or chlamydia, malignant or benign trophoblastic disease, suffering from AIDS and not clinically well or on antiretroviral therapy, between 48 hours and 6 weeks postpartum, chorioamnionitis, prolonged rupture of membranes >18 hours, postpartum endometritis/metritis and un-resolving post-partum haemorrhage were excluded from this study.

All the patients were equally divided in to two groups, 60 patients in each group. Group A caesarean, Group B vaginal deliveries. Intrauterine contraceptive device CuT-80A was inserted in all the patients. Outcomes such as perforation, menstrual disturbance, pregnancy, expulsion, removal and continuation rate was analyzed after follow-up and compare finding between both groups. Follow up was taken at 6 months post insertion of IUCD.

All the data was analyzed by SPSS 24.0. Frequency and percentages was recorded. P.value <0.05 was significantly considered.

RESULTS

Out of 120 patients 48 (40%) patients (23 vaginal, 25 caesarean) were ages between 20 to 30 years, 56 (46.7%) patients (28 vaginal, 28 caesarean) had ages 31 to 40 years and 16 (13.3%) patients (9 vaginal, 7 caesarean) had ages above 40 years. 82 (68.3%) patients (41vaginal 41 caesarean) had urban residency and 38 (31.7%) patients (19 vaginal, 19 caesarean) had rural residency. 72 (60%) patients (36 vaginal, 36 caesarean) were literate while 48 (40%) patients (24 vaginal 24 caesarean) were illiterate. [Table 1]

Table No 1. Baseline characteristics off all the patients

Characteristics	**Group A**	**Group B**	**Total/%age**
	Vaginal (n=60)	Caesarean (n=60)	
Age			
20 to 30 yrs	23	25	48 (40)
31 to 40 yrs	28	28	56 (46.7)
Above 40 yrs	9	7	16 (13.3)
Residence			
Urban	41	41	82 (68.3)
Rural	19	19	38 (31.7)
Education			
Literate	36	36	72 (60)
Illiterate	24	24	48 (40)

P-value >0.05

At 6 months follow-up out of 120 patients 60 patients of vaginal group and 60 patients of caesarean group were analyzed. No perforation and pregnancy was observed in both groups. 76 (63.3%) patients had no complaint regarding IUCDs. Menstrual disturbance reported in 20 (16.7%) patients in which 12 (10%) patients belong to vaginal group and 8 (6.7%) patients had intra-caesarean insertions. Pelvic pain was reported in 13 (10.83%) patients (7 vaginal, 6 caesarean).Expulsion rate was 9 (7.5%) Incidence of expulsion was high in vaginal group 6 (5%) than the intra-caesarean insertion 3 (2.5%) p value <0.05. Removal was done in 14 (11.7%) cases (9 vaginal 5 caesarean) rate of removal of IUCD was high in vaginal group p-value <0.05. Continuation rate at follow-up was 106 (88.3%).[Table2]

Table No 2. Outcomes at final follow-up

Characteristics	**Group A**	**Group B**	**Total/%age**	**P-value**
	Vaginal (n=60)	Caesarean (n=60)	n=120	
Pregnancy	0	0	0	
Perforation	0	0	0	
No complaint	36	40	76 (63.3)	N.S
Menstrual Abnormality	12	8	20 (16.7)	< 0.05
Pelvic/Back Pain	7	6	13 (10.83)	>0.05
Infection	1	1	2 (1.7)	N.S
Expulsion	6	3	9 (7.5)	<0.05
Removal	9	5	14 (11.7%)	<0.05
Continuation Rate	50	56	106 (88.3)	N.S

DISCUSSION

Unwanted pregnancies are still a big public health issue today. To reduce family size and promote mother and child health, family planning methods must be improved. It appears that PPIUCD is a postpartum nursing woman's best bet for contraception because it's long-acting, easy to use, extremely effective, and reversible. Most women who have just given birth accept it, especially those who are unable to return to a health care facility for contraception guidance. Present study was conducted aimed to examine the safety and efficacy of IPPIUCDs in vaginal and caesarean deliveries. In our study total 120

IUCD were inserted 60 after vaginal delivery and 60 intra-caesarean insertions was done. Out of 120 patients 48 (40%) patients (23 vaginal, 25 caesarean) were ages between 20 to 30 years, 56 (46.7%) patients (28 vaginal, 28 caesarean) had ages 31 to 40 years and 16 (13.3%) patients (9 vaginal, 7 caesarean) had ages above 40 years. We found that most of the patients were ages above 25 years and was willing for IUCDs. These results shows similarity to some other studies in which the most common age group of patients regarding IPPIUCDs was 25 to 35 years.[13,14] In our study we found that most of the patients 68.3% had urban residency while 31.7% patients had rural residency. Many of studies shows similarity to some previous studies in which women had urban residency were more likely interested in family planning and use of IUCD.[15,16]

At 6 months follow-up we found no case of perforation and no case of pregnancy. Many of previous studies demonstrated 0% of pregnancy after insertion of IUCDs.[17] In present study 76 (63.3%) patients had no complaint regarding IUCDs. Menstrual disturbance reported in 20 (16.7%) patients in which 12 (10%) patients belong to vaginal group and 8 (6.7%) patients had intra-caesarean insertions. Pelvic pain was reported in 13 (10.83%) patients (7 vaginal, 6 caesarean). A study conducted by Shukla et al.[18] using Cu T 200 B in immediate post-partum period, 27.23% women were found to have heavy bleeding during menstruation. Neither of the women in their study complained of pain in lower abdomen or abnormal vaginal discharge nor did any of them had any sign of PID.

In our study we found expulsion rate was 59 (7.5%). Incidence of expulsion was high in vaginal group 6 (5%) than the intra-caesarean insertion 3 (2.5%) p value <0.05. Removal was done in 14 (11.7%) cases (9 vaginal 5 caesarean) rate of removal of IUCD was high in vaginal group p-value <0.05. 4 patients want removal due to personal reasons, 4 patients had removal due to infection and 6 patients want removal due to abnormal vaginal discharge or irregular bleeding. Multiple previous studies was comparable to our study in which expulsion rate was 5 to 5.50% and removal rate was 10 to 20%.[19] Other studies using CuT-380A have reported IUCD removal due to bleeding/pain as 6% to 8% [20, 21]. Difference in types of IUCD could possibly explain the different rates of bleeding problems. In our study the continuation rate at follow-up was 88.3%. These results shows similarity to some previous studies in which continuation rate was 80 to 85%.[22-23]

CONCLUSION

From the study results we came to the conclusion that PPIUCD is very effective, safe, and reversible contraceptive method which provides contraceptive effect soon after birth. Especially in those patients who have limited access to health care facilities and infrequent post partum care, this method can be considered as the best for them.

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