

Outcomes of Immediate-Postpartum Intrauterine Contraceptive Devices in C-Section and Normal Deliveries

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ABSTRACT

Objective: To determine the outcomes of immediate postpartum insertion of intrauterine contraceptive devices after vaginal (normal) and c-section deliveries.

Study Design: Retrospective/observational

Place & Duration of Study: Mardan Medical Complex MTI, Mardan, During from September 2019 to July 2020.

Methods: Total 120 women were enrolled in this study. Detailed demographics including age, parity, body mass index were recorded after taking written consent. Two groups were maintained. Each group comprised of 60 patients. Group I with normal delivery and group II with C-section. Immediate Postpartum intrauterine contraceptive devices were inserted in all the patients. Outcomes were examined at follow-up and compared between both groups.

Results: Mean age of patients was 27.58±6.94 years. Mean gestational age was 38.12±2.46 weeks. 68 (56.67%) patients were multiparous while 52 (43.33%) were primiparous. No significant difference was observed between both groups regarding menstrual abnormalities, abdominal pain, and vaginal discharge with p-value >0.05. In group I and II 1 (1.67%) and 1 (1.67%) patients had infection, 4 (6.67%) and 2 (3.33%) had expulsion, no significant difference was observed between both groups. Removal rate was high in C-section group as compared to vaginal group (11.67% Vs 3.33%). No perforation and pregnancy was found.

Conclusion: The insertion of immediate postpartum intrauterine contraceptive devices was effective and safe method with low complications rate after vaginal and cesarean section deliveries.

Keywords: Efficacy, Intra-uterine contraceptive device, C-section, Vaginal delivery

INTRODUCTION

Unintended and closely-distant pregnancy for the first 12 months after birth is preempted as a result of post-partum family planning [1]. If couples leave their pregnancies around 2 years apart, family planning can prevent nearly a third of maternal deaths and 10% of child mortality[2]. Short birth intervals are linked to increased mortality and morbidity between maternals and children [3]. In order to avoid an unplanned pregnancy, women in post-partum women need a variety of successful contraceptive methods within a short interval[3]. In the first postpartum year, early recovery of sexual activity and unpredictable ovulation contributes to some undesirable pregnancies. Women in remote areas are often left with unwanted pregnancies even after postpartum tests and contraceptives. In India, 58 per cent of births were spaced under the age of 3 years in the 2015-2016 NFHS (National Family Health Survey)[4]. One of the oldest types of contraception is the intrauterine contraceptive system to prevent pregnancy. IUCD has been developed with minimal complications as an effective, reliable and secure form of contraception. It can be used safely in all women who breastfeed[5]. However, it is still not reasonable. Until a maximum of 48 hours after the date of birth, IUCD can be applied, referred to here as the postpartum IUCD (PPIUCD) or 4 weeks after a birth[6], under the eligibility requirements of the World Health Organization.

An intrauterine contraceptive device (IUCD), which is efficient reversible for the long term and coitus independent

and does not interfere with breastfeeding, provides many advantages in its afterpartum usage.

Cochrane reviews show safety and viability in different settings for postpartum IUCD (PPIUCD) inserts[7-8]. However, high expulsion rates (10.4-16.4 percent) have been recorded in studies [9-10]. Most of the studies published were carried out more than a decade ago. Since then various advancements have been tried to decrease expulsion rates and improve PPIUCD acceptance. PPIUCD insertions via different routes (vaginal or caesarean) may have different outcomes at follow-up.

We conducted this study to determine the outcomes in of postpartum intrauterine contraceptive device PPIUCD insertion after normal delivery and c-section.

METHODS

This retrospective/observational study was conducted at Mardan Medical Complex MTI, Mardan, During from September 2019 to July 2020. A total of 120 patients have been included in this study. The ages of patients were 20 to 40 years, Patients demographics including the age, home and socioeconomic status of the patients, were examined. Women who had extreme bloode, menstrual irregular bleeding, gynaecology, long-term membrane rupture patients, AIDS patients, and those who were not willing were exempt from this research . This study was carried out on women with significant blood infection. The two groups, sixty patients in each group , Group I (normal) and Group II (C-section) were divided into two equal groups. Both patients were treated with an intrauterine CuT-80A

contraceptive unit. Follow-up effects such as perforation, menstrual distortion, pregnancy, removal, and expulsion have been examined and findings between the two groups have been compared. Follow-up was carried out six months after IUCD insertion. All the data was analyzed by SPSS 20. Frequency and percentages was recorded. P. value <0.05 was significantly considered.

RESULTS

Mean age of patients was 27.58±6.94 years. Mean gestational age was 38.12±2.46 weeks. Mean BMI was 23.18±2.46 kg/m². 68 (56.67%) patients were multiparous while 52 (43.33%) were primiparous. (Table 1).

Table No 1: Baseline details of all the patients

Variables	Frequency No.	%age
Mean Age (Yrs)	27.58±6.94	-
Gestational Age (Weeks)	38.12±2.46	-
Mean BMI (kg/m)	23.18±2.46	-
Parity		
Multiparous	68	56.67
Primiparous	52	43.33

According to the complications, no significant difference was observed between both groups regarding menstrual abnormalities, abdominal pain, back pain and vaginal discharge with p-value >0.05. [Table 2]

Table No 2: Comparison of complications between both groups

Complications	Group I (C-section)	Group B (Vaginal)	P value
No complaint	38 (63.33)	43 (71.67)	>0.05
Menstrual irregularity	10 (16.67)	9 (15)	>0.05
Abdominal Pain	2 (3.33)	1 (1.67)	>0.05
Pelvic/Back pain	5 (8.33)	4 (6.67)	>0.05
Vaginal Discharge	5 (8.33)	3 (5)	>0.05

In group I and II 1 (1.67%) and 1 (1.67%) patients had infection, 4 (6.67%) and 2 (3.33%) had expulsion, no significant difference was observed between both groups with p-value >0.05. Removal rate was high in C-section group as compared to vaginal group (11.67% Vs 3.33%) with p-value 0.042. No perforation and pregnancy was found. (Table 3)

Table No 3: Comparison of outcomes

Outcomes	Group I (C-section)	Group B (Vaginal)	P value
Infection	1 (1.67)	1 (1.67)	N.S
Expulsion	4 (6.67)	2 (3.33)	N/s
Removal	7 (11.67)	2 (3.33)	0.042
Perforation	0	0	-
Pregnancy	0	0	-

DISCUSSION

In our country, undesirable pregnancy is still a major problem. The intrauterine contraceptive system postpartum (PPIUCD) seems to provide a discreet, time-consuming, easily available, highly efficient and reversible contraceptive solution for females lactating after age. The method of family planning should be improved in order to achieve a small family size to improve overall maternal and child health. The parturient women who can not return to

health centres for contraceptive therapy are best welcomed. The purpose of this study was to investigate whether PPIUCDs are safe and effective in caesarean and vaginal deliveries. A total of 140 IUCDs were included in our sample 60 after the delivery of the vagina and 60 intracaesareans. Patients' average age was 27.58±6.94 years. The mean pregnancy was 38.12±2.46 weeks. BMI was averaged 23,18±2,46 kg / m². There were 68 multiparous patients (56.67 per cent), while 52 patients were primiparous (43.33 per cent). Most of the patients were over 25 years of age and IUCDs were eager. These findings indicate correlations with some other research in which the most frequent age group of PPIUCD patients was between 25 and 35 years^[11-12]

The following rate in this study was 90%. The overall follow-up rate reported by a study conducted by Sharma et al^[13] was 84.95%. We find no case of drilling or pregnancy at six months of follow-up. Many previous studies reported a 0,0% pregnancy after IUCDs^[14-15] No major difference in menstrual irregularities (16,67 and 15 percent), abdominal pain (3,33 and 1,67 percent), back pain (8,33% and 6,67 percent) and vaginal diabetes was found in the present study according to complications. A study conducted by Shanavas A et al^[16] reported that PPIUCD is an effective intervention in both cesarean and vaginal delivery with no significant differences in safety and efficacy depending on the route of insertion. There was no drilling or malfunction and neither party was at high risk for infection. In two cases inserted by the vaginal route, spontaneous expulsion occurred. In contrast with vaginal insertion, the frequency of missing strings is high in caesarean group.

We found that In group I (cesarean) and II (Vaginal) 1 (1.67%) and 1 (1.67%) patients had infection, 4 (6.67%) and 2 (3.33%) had expulsion, no significant difference was observed between both groups with p-value >0.05. The elimination rate in the group Cesarean section was high compared to the group vaginal with 0.042 p-value (11.67% Vs3.33%). There has been no perforation and pregnancy. Multiple previous studies was comparable to our study in which expulsion rate was 5 to 5.50% and removal rate was 10 to 20%.^[17] Other studies using CuT-380A have reported IUCD removal due to bleeding/pain as 6% to 8%^[18-20].

CONCLUSION

From the study results we came to the conclusion that postpartum intrauterine contraceptive device 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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