

Comparison of Frequency of Menorrhagia after Immediate Versus Delayed Intrauterine Contraception Device Insertion

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ABSTRACT

Objective: To compare the incidence of menorrhagia after immediate post-partum versus delayed intrauterine contraception device insertion in local population.

Place and Duration of Study: Department of Obstetrics & Gynecology, Bahawal Victoria Hospital, Bahawalpur from 1st January 2022 to 31st December 2022.

Methodology: One hundred and ten women willing for intrauterine contraceptive device insertion of age 18-40 years were included. Females in which emergency hysterectomy was done, sepsis, premature rupture of membranes and fibroid uterus were excluded. Group A included the women in which intrauterine contraceptive device was inserted within 24 hours of delivery and Group B included the women in which intrauterine contraceptive device (IUCD) was inserted after 6 weeks of delivery. All patients were followed for 3 months for presence or absence of menorrhagia.

Results: The mean age of women in group A was 28.67±5.72 years and in group B was 29.02±5.63 years. The mean parity in group A was 3.02±1.11 and in group B was 3.16±0.96. Menorrhagia in group A (immediate IUCD) was seen in 04 (7.27%) and in group B (delayed IUCD) was seen in 24 (25.45%) females with p-value of 0.010.

Conclusion: There is less frequency of menorrhagia after immediate IUCD compared to delayed intrauterine contraception device insertion.

Keywords: Intrauterine devices, Post-placental, Menorrhagia

INTRODUCTION

To ensure maternal, fetal, neonatal and child health the foremost intervention is proper spacing between pregnancies and need to have a cost effective long acting and reversible option to offer and most suitable is intrauterine device.¹ Most widely used method worldwide is intrauterine contraception devices which are being used by more than a 100 million users.² The copper IUCDS have the advantage of easily removable and are as effective as tubal ligation.³ There are a few disadvantages as well i.e. rate of expulsion and side effects like pain and vaginal bleeding. These problems lead to its early removal. There are many factors that determine the success of IUCD one of them is mode of delivery others include timing and method of IUCD insertion and physical properties of the IUCD.^{4,5}

After a year of IUCD insertion its failure rate is less than 1% and at ten years the failure rate are those equivalent to sterilization.⁶ ACOG states efficacy of IUCD is comparable with bilateral tubal ligation. Its use has been approved by FDA for consecutive 10 years and it remains effective throughout. Along with its other advantages it also decreases the rate of ectopic pregnancy up to 50% when compared to those women who are not using any contraception.⁷ Long acting reversible contraceptive devices are better than any other form of contraceptive devices of which IUCD is one.⁸

Intrauterine contraceptive device can be placed after a miscarriage, in post-partum period or after an interval period.⁹ Post-partum IUCD insertion refers to placement within 48 hours after delivery a post-placental IUCD insertion is placement of IUCD within 10 minutes of placental delivery. Post-partum IUCD idea has been launched since 1970¹⁰ but it wasn't in general practice till a couple of decades back owing to its higher expulsion rates.¹¹ A study concluded higher expulsion rates in immediate IUCD insertion as compared o 6-8 weeks post-partum insertion of IUCD insertion.¹²

Post-partum IUCD insertion is cheap and convenient method of contraception as it demands less follow-up, ensures compliance and risk of uterine perforation is minimal because of thick post-partum uterine walls.¹³ Also bleeding and cramps are minimal although higher chances of expulsion are there. Improved insertion techniques are now lowering the expulsion rates and thus making it most effective and safe method of contraception.^{14,15} Post-partum IUCD insertion is effective and safe but underutilized method of contraception.¹⁶

A study has showed lesser menorrhagia in post-partum IUCD insertion¹⁴ and in another study¹⁵ it was 4% i.e. equal in both groups.

As the menorrhagia is the most common complaint after intrauterine contraceptive device insertion and previous studies described above have shown controversial results regarding the better time of IUCD insertion, so the purpose of this study was to compare the incidence of menorrhagia after immediate post-partum versus delayed intrauterine contraception device insertion in local population. As the ethnic factors have great impact on the tolerability and efficacy of contraception devices, so my study will provide the local stats in this regard. Then based on these results, the method with less incidence of menorrhagia can be opted in our routine practice guidelines and our population can be motivated and encouraged for using contraception in order to improve their quality of life.

MATERIALS AND METHODS

This randomized controlled trial was conducted at Department of Obstetrics & Gynecology, Bahawal Victoria Hospital, Bahawalpur from 1st January 2022 to 31st December 2022. A total of 110 patients were enrolled. Fifty five patients (group A) were undergone immediate IUCD insertion and 55 patients (group B) were undergone delayed IUCD insertion. The patient's age 18-40 years, women willing for intrauterine contraceptive device insertion and parity 2-6 were included. Patients in which emergency hysterectomy was done due to postpartum haemorrhage (>500 ml blood loss), women with fibroid uterus (assessed on history and ultrasonography), women with sepsis (BP<100/60 mmHg and temperature >101 F), prolonged rupture of membranes of >18hrs and women who lost to follow-up were excluded. After explaining the merits and demerits of study and taking informed written consent. All patients were followed for 3 months for presence or absence of menorrhagia and all this data was recorded. The data was entered and analyzed through SPSS-22.

RESULTS

The mean age of women in group A was 28.67±5.72 years and in group B was 29.02±5.63 years. Majority of the patients 70 (63.64%) were between 18 to 30 years of age (Table 1). The mean parity in group A was 3.02±1.11 and in group B was 3.16±0.96 (Table 2). Menorrhagia in group A (immediate IUCD) was seen in 4

(7.27%) and in group B (delayed IUCD) was seen in 24 (25.45%) females with p-value of 0.010 (Table 3).

Table 1: Age distribution for both groups

Age (years)	Group A (n=55)	Group B (n=55)	Total (n=110)
18-30	33 (60%)	37 (67.27)	70 (63.64%)
31-40	22 (40%)	18 (32.73%)	40 (36.36%)
Mean±SD	28.67±5.72	29.02±5.63	28.89±5.68

Table 2: Distribution of patients according to parity in both groups

Age (years)	Group A (n=55)	Group B (n=55)	Total (n=110)
2-3	33 (6%)	37 (67.27%)	70 (63.64%)
4-6	22 (4%)	18 (32.73%)	40 (36.36%)
Mean±SD	3.02±1.11	3.16±0.96	3.11±1.05

Table 3: Comparison of frequency of menorrhagia after immediate versus delayed intrauterine contraception device insertion (n=110)

Menorrhagia	Group A (n=55)	Group B (n=55)
Yes	4 (7.27%)	14 (25.45%)
No	51 (92.73%)	41 (74.55%)

P value is 0.010 which is statistically significant

DISCUSSION

One of the long acting contraceptive devices is intrauterine contraceptive devices, they are widely used across the world because of their efficacy and safety. This can be attributed to its lower rates of unplanned pregnancies as it doesn't depend upon the patient. There is unanimity to its safety and efficacy in past and recent literature. IUCD is the method of choice in post partum period.¹⁶

Birth spacing of a minimum of two years has improved fetal and maternal health.¹⁷⁻¹⁹ and thus a method should be used after delivery that is effective and has lesser failure rates to achieve adequate birth spacing. IUCD can be safely and efficaciously place within 48 hours of delivery or can be placed after 4 weeks postpartum.^{20,21} Immediate placement poses more expulsion rates still its advantages in preventing unplanned pregnancies in specific sets of population outweigh this risk.

Progesterone containing IUCD has only local affect on the endometrium and very less systemic effects and thus patients can be counselled that IUCD will not affect their breast milk quantity or quality. Despite all the benefits of post partum IUCD insertion, lack of return of patients for follow up, inaccessibility to IUCD.²² Lack of knowledge of health care provider and inadvertent early pregnancy are the common barriers for its wide spread use.²³ Some of these barriers can be overcome by immediate use of post partum IUCD i.e. within 48 hours of delivery before discharging the patient from the hospital.²⁴ This is the time when women are more convinced for birth spacing and counseling can be readily done.

In this study, menorrhagia in group A (immediate IUCD) was seen in 04 (7.27%) and in group B (delayed IUCD) was seen in 24 (25.45%) females with p-value of 0.010. In a study, the incidence of menorrhagia after immediate IUCD insertion was found to be 5.2% and after delayed IUCD insertion was 21.2%.¹⁴ In another study, it was found to be 4.0% in both groups.¹⁵ In one study in India, IUCD placed in 150 cases immediate postpartum (PPIUCD) and in other 150 cases interval IUCD. On six months follow up, irregular bleeding/Vagina was in 23.5% in PPIUCD group and 88.5% in interval IUCD group.²⁵ Higher rates of menorrhagia were observed while using copper T device in post partum period, in a study conducted by Shukla et al.²⁷ Different bleeding patterns were observed with different varieties of IUCD. Celen et al²⁸ Concluded more number of patients suffered from bleeding problems in immediate vs delayed group i.e. 11.4% and 8.2% respectively. Another study favored immediate group than the delayed one in terms of expulsion and complication rates.²⁹

Lesser incidence of menorrhagia after IUCD insertion within 48 hours is in part due to lactational amenorrhea in post partum period and menorrhagia is thus not significantly evident for a

longer period. Ei-Shafei et al³⁰ observed menorrhagia in almost 9 percent patients with CuT IUCD immediate post partum insertion over a period of one year. Eroglu et al³¹ reported menorrhagia more in post placental IUCD insertion group as compared to post partum insertion group.³¹

CONCLUSION

There is less frequency of menorrhagia after immediate IUCD compared to delayed intrauterine contraception device insertion. So, we recommend that after immediate IUCD insertion after delivery should be used as a best time for insertion in order to decrease the complications as well as morbidity of these women.

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