

Study of Intrauterine Contraceptive Device Acceptance in Postpartum Period – A Retrospective Study

K. Jeyaprabha

Assistant Professor, Department of Obstetrics and Gynaecology, Dindigul Government Medical College Hospital, Adiyanthu, Tamil Nadu, India

Abstract

Introduction: Postpartum period is defined to be an ideal time for family planning counseling. Being the second-largest populated country, India has a high rate of unintended pregnancy, especially in postpartum women. There is a need for accessible, reliable contraception like postpartum intrauterine contraceptive device (PPIUCD) in our country. The present study attempts to determine the safety and complication of intrauterine devices in postpartum women.

Materials and Methods: This retrospective study was done in the department of obstetrics and gynecology in January 2021. After delivery, women who had accepted PPIUCD (vaginally or by lower segment cesarean section) were included in this study. With the help of data collected, relevant parameters were critically analyzed in our study.

Results: A total of 438 deliveries took place, out of which only 412 were inserted PPIUCD. Hence, the total acceptance rate was 94%. The majority of cases were below the age of 25 (60%) and most of them were primipara (65%). In our study, menorrhagia (4%) was the most common complication.

Conclusion: The IUCD insertion has been proven to be a safe and effective contraceptive method with very few side effects and no major complications.

Key words: Contraceptive, Lower segment cesarean section, Postpartum intrauterine contraceptive device, Postpartum

INTRODUCTION

Women in India have used intrauterine contraceptive devices (IUCDs) for decades for spacing pregnancies. It is the most commonly used reversible method of contraception worldwide, with about 127 million current users.^[1,2] According to the National Family Health Survey (NFHS) 4 data, the contraceptive prevalence rate in India is 56.3% and more than 40% of the couples are not using any contraception method.^[3,4] Approximately 27% of births in India occur <24 months after a previous birth. Another 34% of births occur between 24 and 35 months;

61% of births in India occur at intervals shorter than the recommended birth-to-birth interval of approximately 36 months.^[5] Short intervals between births are linked with higher maternal and child mortality and morbidity.^[6] The postpartum period is a highly vulnerable period for unintended pregnancy as there are limited contraceptive options for breastfeeding mothers. Immediate postpartum is the ideal time to begin contraception as women in this period are more receptive to family planning advice. Postpartum family planning (PPFP) prevents unintended and closely spaced pregnancies through the first 12 months following childbirth.^[3] Studies show that pregnancies taking place within 24 months of previous birth have a higher risk of adverse outcomes such as abortions, preterm labor, postpartum hemorrhage, low birth weight babies, fetal loss, and maternal death.^[7]

According to NHF-4, In India, 78.9% of deliveries are institutional delivery. With increasing numbers of women electing to give birth in health institutions, India's

Access this article online



www.ijss-sn.com

Month of Submission : 01-2021
Month of Peer Review : 01-2021
Month of Acceptance : 02-2021
Month of Publishing : 03-2021

Corresponding Author: K. Jeyaprabha, Department of Obstetrics and Gynaecology, Dindigul Government Medical College Hospital, Adiyanthu, Tamil Nadu, India.

government decided to strengthen PPF and introduced postpartum IUCD (PPIUCD) services in a phased manner. The provision of PPIUCDs is rapidly scaled up in India. The Government of India is promoting institutional deliveries through programs like Janani Suraksha Yojana. This program scheme has increased the institutional deliveries rate and postpartum care in government hospitals. Hence, it allows the health-care providers to counsel women regarding PPIUCD insertion.^[8]

The present study was planned to describe the experience of immediate postpartum IUCD in women delivering vaginally and lower segment cesarean section (LSCS).

Aim

The aim of the study was as follows:

- To determine the proportion of women who had accepted the PPIUCD insertion related to age, parity, and mode of delivery.
- To determine the complications/complaints of immediate PPIUCD insertion among patients who had accepted the device.

MATERIALS AND METHODS

This retrospective study was done in the department of obstetrics and gynecology in January 2021.

Inclusion Criteria

Woman who had accepted immediate postpartum (after removal of the placenta) IUD insertion following delivery (vaginally or by LSCS) was included in the study.

Exclusion Criteria

Women were excluded from having anemia (hemoglobin <10 g/dl), PPH, premature rupture of membranes >18 h, obstructed labor, fibroid, congenital malformation of uterus, active sexually transmitted disease, lower genital tract infection, and allergy to copper.

Skilled obstetricians did the insertion of PPIUCD under asepsis after informed consent. The standard infection prevention protocols were followed. Insertion of IUCD was done postplacental, intracesarean, and immediate

postpartum. Patients were followed for 2 months. The quality of PPIUCD services provided at the center was assessed and monitored as per the performance standards for immediate PPIUCD counseling and assistance.

RESULTS

During the study period, January 1, 2021–January 31, 2021, the total number of PPIUCD acceptance was 412 out of 438 counseled patients. Of these 412 accepted patients, 60% of patients were from the age group <25 years followed by 32% from 26 to 30 years. Out of 412 patients (total accepted), the majority of acceptance (81%) was observed from the rural location as compared to urban location (19%) [Table 1].

Maximum 65% acceptance was observed among primipara compared to 35% in multipara [Table 2]. Out of total acceptance, 70% of patients accepted PPIUCD following vaginal delivery while 30% accepted PPIUCD LSCS [Table 3].

Among the total accepted patients, 40% and 30% had inserted PPIUCD within 10 min and 48 h after vaginal delivery, respectively, while 30% had inserted after LSCS [Table 4].

Of the 412 patients, 44 had complications/complaints. It was observed that 3% had expulsion, 1 showed infection, 3% had complaint of abdominal pain, and 4% showed menorrhagia [Table 5].

DISCUSSION

According to a WHO report in 2006, better family planning and birth spacing services resulted in better maternal and neonatal outcome. When promoted in countries with high birth rates, 32% of all maternal deaths and over 1 million deaths of children under five could be prevented. Healthy timing and spacing of pregnancies have a positive effect on maternal health and newborn outcomes.^[2,9]

The IUD is more effective than oral contraceptives at preventing pregnancy and it is reversible. Once it is

Table 1: Acceptance of postpartum intrauterine contraceptive device in relation to age group

Total deliveries	Accepted postpartum intrauterine contraceptive device	Location	Age group	Count	Percent accepted	Total accepted before counseling	Total accepted after counseling
438	412 (94%)	Rural 332 (81%) Urban 80 (19%)	<25	248	60%	244 (59%)	168 (41%)
			26–30	130	32%		
			31–35	28	7%		
			>36	6	1%		
			Total				

Table 2: Acceptance of postpartum intrauterine contraceptive device in relation to parity

Parity	Count	Percentage
Primi	267	65%
Multi	145	35%

Table 3: Acceptance of postpartum intrauterine contraceptive device in relation to mode of delivery

Mode of delivery	Count	Percentage
Vaginal delivery	290	70
Lower segment cesarean section	122	30
Total	412	

Table 4: Acceptance of postpartum intrauterine contraceptive device in relation to insertion time

Insertion time	Count	Percentage
Within 10 min	168	40
Within 48 h	122	30
After lower segment cesarean section	122	30

Table 5: Post-insertion complications

Post-insertion complications	Count	Percentage
Expulsion	12	3
Infection	4	1
Abdominal pain	12	3
Menorrhagia	16	4

removed, fertility returns. (Studies have found no adverse effects on fertility with the current IUDs).^[10]

- Unlike the pill, there is no daily routine to follow
- Unlike the barrier methods (spermicides, diaphragm, cervical cap, and the male or female condom), there is no insertion procedure to cope with before or during sex
- Intercourse can resume at any time and as long as the IUD is properly positioned, neither the user nor her partner typically feels the IUD or its strings during sexual activity
- It is the least expensive form of contraception over the long term.

Out of all women who are present in the study, the total acceptance of 412 women was observed most of them were coming from a rural background (81%) and remaining from urban area (19%). The highest rate of acceptance was observed among the age group of below 25 years (60%), which is comparable with studies done by Doley and Pegu,^[2] whereas in a study by Maluchuru *et al.*^[11] from Guntur, the highest rate of acceptance was among the age group

of 30–39 years (27.67%). In this study, the acceptance was higher in primipara (65%) contrary observation was found in a study in North India, by Shukla *et al.*^[7] where the acceptance was higher in multipara (68.33%).

Studies by Grimes *et al.*^[12] and Borthakur *et al.*^[13] GMCH Assam also found higher acceptance among multipara. Goswami *et al.*^[14] also found higher acceptance (48%) among multipara, whereas Maluchuru *et al.* found a higher acceptance in primipara, which were 15.42, 71.91, and 15.47%, respectively.^[11,15,16]

In our study, the acceptance among LSCS patients and vaginally delivered patients was 30% and 70%, respectively. Whereas Gautam *et al.*^[15] observed LSCS – 36.09% and NVD – 11.33% and Jairaj and Dayyala,^[3] Telangana, showed LSCS – 43.9%, NVD – 6.3%. Borthakur *et al.*^[13] found more than 50% of acceptors among patients undergoing LSCS. In our study, menorrhagia was the most common complication (4%). It is similar to Mishra^[17] (23.5%) and Gautam *et al.*^[15] (19%). Whereas Maluchuru *et al.*^[11] found a missing thread (16%) as the most common complication in their study. In a study in Central India by Kanhere *et al.*,^[18] the expulsion was the most common complication (22%). Hence, PPIUCD was reported to be one of the safe and effective methods.

CONCLUSION

This study found a good acceptance of PPIUCD among women participants. Thus, immediate postpartum IUCD insertion appears to be a safe and effective contraceptive method with very few side effects and no major complications.

REFERENCES

1. Nelson A. Gynaecology and Obstetrics in: Intrauterine Contraceptives. Philadelphia, PA: Lippincott Williams and Wilkins; 2004. p. 6.
2. Doley R, Pegu B. A retrospective study on acceptability and complications of PPIUCD insertion. *J Evol Med Dent Sci* 2016;5:1631-4.
3. Jairaj S, Dayyala S. A cross sectional study on acceptability and safety of IUCD among postpartum mothers at Tertiary Care Hospital, Telangana. *J Clin Diagn Res* 2016;10:LC01-4.
4. Taneja N, Gupta S, Kaur K. A retrospective study of post-partum intrauterine contraceptive devices in a government maternity home of Delhi. *Int J Reprod Contracept Obstet Gynecol* 2020;9:4932-6.
5. Postpartum IUCD Reference Manual, New Delhi. Family Planning Division: Ministry of Health and Family Welfare, Government of India; 2010.
6. Rutstein SO. Effects of preceding birth intervals on neonatal, infant and under-five years mortality and nutritional status in developing countries: Evidence from the demographic and health surveys. *Int J Gynaecol Obstet* 2005;89:S7-24.
7. Shukla M, Qureshi S, Chandrawati R. Post-placental intrauterine device insertion-a five year experience at a tertiary care centre in North India. *Indian J Med Res* 2012;136:432-5.
8. Chi IC, Wilkens L, Rogers S. Expulsions in immediate postpartum

- insertions of Lippes Loop D and Copper T IUDs and their counterpart Delta devices-an epidemiological analysis. *Contraception* 1985;32:119-34.
9. Maternal and Child Health Integrated Program and PPFPA Activities, WHO Report, Washington, DC; 2011.
 10. National Research Council (US) Committee on population. contraception and reproduction: Health consequences for women and children in the developing world. In: 4 Contraceptive Benefits and Risks. Washington, DC: National Academies Press; 1989.
 11. Maluchuru S, Aruna V, Prabhavathi N. Postpartum intrauterine device insertion-2 years, experience at tertiary care center in Guntur medical college/Govt. general hospital, Guntur. *J Dent Med Sci* 2015;14:56-61.
 12. Grimes DA, Lopez LM, Schulz KF, van Vliet HA, Stanwood NL. Immediate postpartum insertion of intrauterine devices. *Cochrane Database Syst Rev* 2010;5:CD003036.
 13. Borthakur S, Sarma AK, Alakananda R, Bhattacharjee AK, Deka N. Acceptance of post partum intra-uterine contraceptive device (PPIUCD) among women attending Gauhati medical college and hospital (GMCH) for delivery between January 2011 to December 2014 and their follow up. *J Evol Med Dent Sci* 2015;4:15756-8.
 14. Goswami G, Yadav K, Patel A. A prospective study to evaluate safety, efficacy and expulsion rate of post placental insertion of intra uterine device. *J Evol Med Dent Sci* 2015;4:9770-74.
 15. Gautam R, Arya KN, Kharkwal S, Singh S, Trivedi M. Overview of immediate PPIUCD application in Bundelkhand region. *J Evol Med Dent Sci* 2014;3:9518-26.
 16. Vidyarama R, Nagamani T, Prasad K. PPIUCD as a long acting reversible contraceptive (IARC)-an experience at a tertiary care centre. *Int J Sci Res* 2015;4:5-7.
 17. Mishra S. Evaluation of safety, efficacy, and expulsion of post-placental and intra-cesarean insertion of intrauterine contraceptive devices (PPIUCD). *J Obstet Gynaecol India* 2014;64:337-43.
 18. Kanhere AV, Pateriya P, Jain M. Acceptability and feasibility of immediate postpartum IUCD insertion in a tertiary care centre in central India. *Int J Reprod Contracept Obstet Gynecol* 2015;4:179-84.

How to cite this article: Jeyaprabha K. Study of Intrauterine Contraceptive Device Acceptance in Postpartum Period – A Retrospective Study. *Int J Sci Stud* 2021;8(12):192-195.

Source of Support: Nil, **Conflicts of Interest:** None declared.