

User Acceptance, Safety, and Effectiveness of The Postpartum Intrauterine Contraceptive Device

Momna Khan¹, Ghazala Shaheen², Amjid Azam Sirewal³, Sumaira Khoso⁴, Bakhtawar⁵, Fahmida Naheed⁶

¹Momna Khan, Assistant Professor Obs and Gynaecology, Bilawal Medical College CDF Hospital Hyderabad Pakistan.
Email: drmomnakhan@yahoo.com

²Ghazala Shaheen, Registrar Obs and Gynaecology, Tuwaiq Medical Complex Riyadh Saudi Arabia.
Email: Dr.ghazalashaheen@gmail.com

³Amjid Azam Sirewal, Assistant Professor Community Medicine, Muhammad Medical College/ Ibn-E-Sina University Mirpurkhas Sindh Pakistan.
Email: amjadazam2023@gmail.com

⁴Sumaira Khoso, LMO, Bolan Medical Complex Hospital Quetta Pakistan.
Email: doc.sumaira@live.com

⁵Bakhtawar, WMO Obs and Gynaecology, Liaquat University of Medical Health and Science Hyderabad Pakistan.
Email: akhtawarmemon52@gmail.com

⁶Fahmida Naheed, Assistant Professor Obs and Gynaecology, Bolan Medical Complex Hospital Quetta Pakistan.
Email: fahmidanaheed713@gmail.com

*Correspondence author: Momna Khan (drmomnakhan@yahoo.com)

Received: 19 November 2023

Accepted: 3 December 2023

Citation: Khan M, Shaheen G, Sirewal AA, Khoso S, Bakhtawar, NaheedF. (2023). User acceptance, Safety, and effectiveness of The Postpartum Intrauterine Contraceptive Device. *History of Medicine* 9(2): 768–771. <https://doi.org/10.17720/2409-5834.v9.2.2023.100>

Abstract

Background: Reducing the rates of newborn and maternal mortality requires keeping a healthy distance between pregnancies and properly timing them. In addition to reducing poverty and hunger, family planning lowers the risk of 32% of maternal fatalities and 10% of child deaths. There is an increased risk of newborn morbidity and mortality when there are short gestational intervals. Condoms, intrauterine contraceptive devices (IUCD), injectable, oral contraceptive pills (OCPs), sterilization, and other treatments are readily available as short- and long-acting contraceptive methods. The most cost-effective long-term contraceptive alternative is the copper-containing intrauterine contraceptive device, or Cu IUCD. Cu IUCD is a reversible, non-hormonal contraceptive method that is safe to use while nursing and has a long effective life. **Objective:** To evaluate user acceptance, safety, and effectiveness of the Postpartum intrauterine contraceptive device. **Study design:** A prospective study Place and Duration This study was conducted in Bilawal Medical College CDF Hospital Hyderabad from October 2022 to October 2023 **Methodology:** A non-probability consecutive sampling strategy was used in the investigation. Every woman who visited antenatal clinics and was part of the study received counseling regarding several contemporary methods of contraception. A variety of contemporary contraceptive methods were offered to women, including IUCD, tubal ligation, implants, pills, and injectable. Those who opted for intrauterine contraceptive device insertion after giving birth had their choices tracked and documented. These women either had a cesarean delivery or a typical vaginal delivery. **Results:** A total of 250 patients were involved in this research. The average age of the patients was 27.1 years. Within 10 minutes of delivery of placenta, PPIUCD was inserted. A total of 212 women were multigravida while 38 were primigravida. There were no cases of perforation. **Conclusion:** Intrauterine devices placed after childbirth have shown to be a dependable, safe, reversible, and long-acting means of birth control.

Keywords

Intrauterine Devices, Birth Control, PPIUCD

Reducing the rates of newborn and maternal mortality requires keeping a healthy distance between pregnancies

and properly timing them [1]. In addition to reducing poverty and hunger, family planning lowers the risk of 32% of

maternal fatalities and 10% of child deaths [2, 3]. There is an increased risk of newborn morbidity and mortality when there are short gestational intervals [4]. For this reason, it is critical to spread knowledge about family planning throughout preconception counseling and the antenatal stage. Moreover, it is imperative to offer a range of efficacious contraceptive techniques to enable women throughout the postpartum period to prevent unintended births [5].

Condoms, intrauterine contraceptive devices (IUCD), injectable, oral contraceptive pills (OCPs), sterilization, and other treatments are readily available as short- and long-acting contraceptive methods [6]. The most cost-effective long-term contraceptive alternative is the copper-containing intrauterine contraceptive device, or Cu IUCD. The Cu IUCD is a reversible, non-hormonal contraceptive method that is safe to use while nursing and has a long effective life [7]. It causes the endometrium to become locally inflamed, which makes the environment unsuitable for sperm.

The postpartum intrauterine contraceptive device (PPIUCD) is a safe and effective method of contraception, according to a 2010 Cochrane review [8]. Because of its ease of use, high level of acceptance among women, and guarantee that it won't result in pregnancy, it is widely used and accepted [9]. A further Cochrane review published in 2007 examined 35 randomized control trials and found that Copper-T 380A was more effective than Multiload 375, Copper T 220, Multiload 250, and Copper T 200 in preventing pregnancy [10].

Pakistan has a high fertility rate which is 3.8, according to the Pakistan Demographic and Health Survey (PDHS) 2012–2013 [11]. This suggests that a Pakistani woman would have 3.8 children on average during her reproductive lifetime if fertility rates continue to be as high as they were in the three years before the study. Even though Pakistan's fertility rate decreased from 5.4 (PDHS 1990–91) to 3.8 (PDHS 2012–13), it is still very difficult to reach the MDG target of 2.1 births per woman. Nowadays, 35% of married women use contraceptive techniques, compared to 26% of women who use contemporary methods. A total of 65% of women do not receive the contraception they need.

Numerous causes, such as low awareness, cultural, societal, and religious restrictions, and a lack of facilities, are blamed for the low use of contraceptives [12]. Many women only go to hospitals for childbirth, and those who are told to get contraception after six weeks frequently do not, which results in unwanted pregnancies. Postpartum Intrauterine Contraceptive Device is the most appropriate option for our nation in light of this. Five years later, there has been no discernible rise in the use of modern contraception; according to the PDHS 2017–2018, 25% of women reported using contemporary contraceptive methods. The most common practices are condom use or male and female sterilization (9% each). The purpose of this study is to evaluate user acceptance,

safety, and effectiveness of the postpartum intrauterine contraceptive device.

Methodology

A non-probability consecutive sampling strategy was used in the investigation. Every woman who visited antenatal clinics and was part of the study received counseling regarding several contemporary methods of contraception. Written and informed consent was sought from the patient and her spouse both during the antenatal period and at the time of delivery.

Exclusion criteria: If a woman consented to have an IUCD placed after giving birth, but had any of the following symptoms instead: severe anemia (hemoglobin less than 7g/dl), obstructed labor, prelabor rupture of membranes lasting more than 18 hours, signs of chorioamnionitis, distorted uterine cavity (fibroid uterus or congenital anomaly), or active genital tract infection, she would not have received an IUCD right away.

A variety of contemporary contraceptive methods were offered to women, including IUCD, tubal ligation, implants, pills, and injectable. Those who opted for intrauterine contraceptive device insertion after giving birth had their choices tracked and documented. These women either had a cesarean delivery or a typical vaginal delivery.

Within ten minutes after the placenta was delivered, the Copper Intrauterine Contraceptive Device was implanted. Kelly's forceps were used to vaginally position the Cu IUCD at the uterine fundus for women who had vaginal deliveries. When a cesarean section was performed, through lower segment transverse incision iucd was kept at fundus of uterus and thread was guided towards os. The thread was cut in both cases, and patients were instructed to show up for a follow-up appointment after six weeks. By keeping an eye on perforations, infections, or excessive vaginal bleeding, safety was evaluated. SPSS version 26 was used to analyze the data.

Results

There were a total of 250 patients involved in this research. The average age of the patients was 27.1 years. Within 10 minutes of delivery of placenta, PPIUCD was inserted. Table number 1 shows the acceptance of PPIUCD among multigravida and primigravida.

Table No1: Acceptance of PPIUCD Among Multigravida and Primigravida.

Gravida	n	%
Multigravida	212	84.8
Primigravida	38	15.2

Table number 2 shows the insertion of PPIUCD in spontaneous, cesarean, and different modes of deliveries.

Table No2: Insertion of PPIUCD in Spontaneous, Cesarean, and Different Modes of Deliveries.

PPIUCD Insertion	n	%
Insertion in spontaneous vs cesarean deliveries		
● Cesarean deliveries	91	36.4
● Spontaneous deliveries	159	63.6
Insertion in different mode of deliveries		
● Emergency cesarean section	66	26.4
● Assisted breech delivery	3	1.2
● Spontaneous vaginal delivery	154	61.6
● Elective cesarean sections	25	10.0
● Instrumental delivery	2	0.8

Table number 3 shows expulsion rate and complications of PPIUCD.

Table No3: Expulsion Rate and Complications of PPIUCD.

	n	%
Expulsion of PPIUCD after insertion		
● Yes	8	3.2
● No	242	96.8
Heavy vaginal bleeding after PPIUCD insertion		
● Yes	20	8.0
● No	230	92.0
Infection after insertion of PPIUCD		
● Yes	2	0.8
● No	248	99.2

Discussion

The majority of women were happy with their choice to use Postpartum Intrauterine Contraceptive Devices as their method of contraception, according to our inquiry on the insertion of PPIUCD in this research. The World Health Organization (WHO) has approved this procedure, which is thought to be reversible, safe, and effective [13]. One non-hormonal contraceptive method that is thought to be safe to use while nursing is PPIUCD. Women are very motivated to use contraception during the first few weeks after giving birth, and lochia may mask frequent adverse effects like lower abdomen pain and vaginal bleeding [14]. For women in underdeveloped nations like Pakistan, this may be the only opportunity to see a healthcare professional. Delaying effective contraception for six weeks could lead to unintended pregnancies in these women.

According to our study, 9.5% of women thought that the Postpartum Intrauterine Contraceptive Device was a reliable and safe method of contraception. Compared to the Pakistan Demographic and Health Surveys (PDHS) conducted in 2012–13 and 2017–18, hardly 2% of women thought that PPIUCD was a reliable method of birth control. Our female population's acceptance and desire

for PPIUCD have grown as a result of greater awareness of the condition. Nonetheless, raising awareness and dispelling misconceptions about PPIUCD are still essential if we are to meet the Millennium Development Goals and address the unmet need for contraception. Remarkably, throughout the 6-week follow-up, only 2 (1%) patients developed moderate pelvic inflammatory illness, and no incidences of perforation were reported. Between PPIUCD insertions performed during a cesarean section and those performed following a vaginal delivery, the infection rate did not change substantially.

Our results are consistent with other regional and international research on this topic. Between March 2011 and February 2012, a research carried out at Sindh Government Hospital in Qatar found no cases of infection or perforation [15]. In a similar study, 0.2% of patients at Karachi's Sobhraj Maternity Hospital had infections, according to a local research [16]. There was no increase in the rates of major bleeding or infection among PPIUCD acceptors, according to research by Welkovic et al. that compared the incidence of these events between people who accepted PPIUCD and those who declined treatment [17]. Furthermore, comparable results were observed in a study comparing the early postpartum and immediate post placental periods for PPIUCD implantation [18].

Eight percent of the individuals in this study reported having substantial vaginal bleeding. Mefenamic acid and tranexamic acid were prescribed, and these individuals also received counseling. Because the treatment was successful, there were no cases where significant vaginal bleeding that persisted untreated necessitated the removal of the Postpartum Intrauterine Contraceptive Device. Local studies, on the other hand, reported larger percentages: 29.3% and 6.6% of patients, respectively, had significant vaginal bleeding and IUCD removal [19]. According to an Indian study, 283 out of 1307 participants reported experiencing severe menstrual bleeding, which resulted in the removal of the contraceptive device in 65 cases [20].

However, studies by Welkovic et al. showed that there was no increase in the incidence of severe bleeding. 3.2% of patients in our study reported having their Postpartum Intrauterine Contraceptive Device removed at the 6-week follow-up. Interestingly, ejection rates did not differ statistically significantly between patients who had a cesarean section and those who had a PPIUCD put following a typical vaginal delivery.

Conclusion

Intrauterine devices placed after childbirth have shown to be a dependable, safe, reversible, and long-acting means of birth control.

Funding Source

This research was conducted without receiving financial support from any external source.

Conflict in the Interest

The authors had no conflict related to the interest in the execution of this study.

Permission

Prior to initiating this study, approval from the ethical committee was obtained to ensure adherence to ethical standards and guidelines.

References

- Rehman M, Akhtar O, Yasmin H, Majid E. Acceptance of Postpartum Intrauterine Contraceptive Device as a Method of Contraception in a Tertiary Care Hospital, Karachi. *Journal of The Society of Obstetricians and Gynaecologists of Pakistan*. 2022 Jun 8;12(2):91-4.
- Ashraf S, Bashir M, Yousaf RT. In A Tertiary Care Hospital, the Use of A Postpartum Intrauterine Contraceptive Device as A Method of Contraception. *Pakistan Journal of Medical & Health Sciences*. 2022;16(11):667-.
- Faisal M, Naseer O, Khan N, Chaudhary R. Barriers in the use of post partum intra uterine contraceptive device. *J Soc Obstet Gynaecol Pak*. 2016;6(1):22-5.
- Nisar N, Dars S, Awan S, Jokhio F. Post-partum intrauterine contraceptive device: experience from tertiary care hospital in sindh Province Pakistan. *Journal of Liaquat University of Medical & Health Sciences*. 2020 Oct 5;19(03):162-6.
- Nalini N, Singh B, Jha S, Singh AV. Acceptance, safety and efficacy of postpartum intrauterine contraceptive device. *Journal of Family Medicine and Primary Care*. 2023 May 1;12(5):868-73.
- Sultana R, Badar N, Usmani SS, Hafēez M. Women's Experience with Postpartum Intrauterine Contraceptive Device. *Journal of The Society of Obstetricians and Gynaecologists of Pakistan*. 2022 Sep 4;12(3):267-71.
- Thota S, Nasreen MU, Ramadevi S, Himasree M. Study of acceptability for the use of postpartum intrauterine contraceptive device among women attending government general hospital, Guntur. *New Indian J OBGYN*. 2022;8.
- 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 Dec 1; 9:4932-6.
- Fatima S, Rehman A, Ahmed Z, Sajid MM, Habiba U, Rehman A. Postpartum Insertion of Intrauterine Contraceptive Device: A Safe And Effective Contraception. *Journal of Ayub Medical College Abbottabad-Pakistan*. 2022 Oct 2;34.
- Jain R, Sharma M, Gupta S. Acceptance, safety and complications of postpartum intra uterine contraceptive device: a prospective study in tertiary care hospital. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*. 2019 May 1;8(5):1916-21.
- Anjum Afshan SSA. Immediate Postpartum IUCD insertion: An opportunity not to be missed. *Annals Abbasi Shaheed Hospital and Karachi Medical and Dental College*. 2013 June 2014;19(1):5.
- Eroglu K, Akkuzu G, Vural G, Dilbaz B, Akin A, Taskin L, et al. Comparison of efficacy and complications of IUD insertion in immediate postplacental/early postpartum period with interval period: 1 year follow-up. *Contraception*. 2006 Nov;74(5):376-81. PubMed PMID: 17046378.
- Shukla M, Qureshi S, Chandrawati. Post-placental intrauterine device insertion--a five-year experience at a tertiary care centre in north India. *The Indian journal of medical research*. 2012 Sep;136(3):432-5. PubMed PMID: 23041736. Pubmed Central PMCID: 3510889.
- SZ Bhutta IB, Bano K. Insertion of intrauterine contraceptive device at cesarean section. *JCPSP*. 2011;21(9):4. 2011.
- Singal S, Bharti R, Dewan R, Divya, Dabral A, Batra A, et al. Clinical Outcome of Postplacental Copper T 380A Insertion in Women Delivering by Caesarean Section. *Journal of clinical and diagnostic research: JCDR*. 2014 Sep;8(9): OC01-4. PubMed PMID: 25386484. Pubmed Central PMCID: 4225936.
- Studies Niop. Pakistan Demographic and Health Survey Islamabad: National institute of population studies; 2017-2018. Available from: Pakistan Demographic and Health Survey 2017- 18 [FR354] (dhsprogram.com).
- Balsarkar GD, Nayak A. Postpartum IUCD: Rediscovering a Languishing Innovation. *Journal of obstetrics and gynaecology of India*. 2015 Jul;65(4):218-20. PubMed PMID: 26243985. Pubmed Central PMCID: 4518011.
- Ortiz ME, Croxatto HB, Bardin CW. Mechanisms of action of intrauterine devices. *Obstetrical & gynecological survey*. 1996 Dec;51(12 Suppl): S42-51. PubMed PMID: 8972502.
- Kaneshiro B, Aeby T. Long-term safety, efficacy, and patient acceptability of the intrauterine Copper T-380A contraceptive device. *International journal of women's health*. 2010 Aug 09; 2:211-20. PubMed PMID: 21072313. Pubmed Central PMCID: 2971735.
- Cleland J, Bernstein S, Ezeh A, Faundes A, Glasier A, Innis J. Family planning: the unfinished agenda. *Lancet*. 2006 Nov 18;368(9549):1810-27. PubMed PMID: 17113431.