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ORIGINAL ARTICLE

Complications of Post-Partum Intrauterine Contraceptive Device Insertion

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ABSTRACT

Objective: To determine the complications of post-partum intrauterine contraceptive device insertions in terms of frequency of bleeding and expulsion.

Patients and Methods: A total number of 180 females aged 18–40 years with gestational age 36–40 weeks and having Hb ≥8 g/dl at time of delivery. All antenatal patients admitted for delivery to our hospital were counseled for PPIUCD. The PPIUCD was inserted within 10 minutes after placental delivery. Patients were called for follow-up after 6 weeks, 3 months and 4 months. Complications of PPIUCD were measured in terms of bleeding and expulsion rate within 4 months of follow-up.

Results: Mean age of patients was 28.86±4.83 years. Mean parity of females was 2.13±0.90. There were 126 (70.0%) patients who underwent normal vaginal delivery while remaining 54 (30.0%) patients underwent C-section. At the end of follow-up period, bleeding was found in 26 (14.4%) patients after IUCD insertion and expulsion was found in only 11 (6.11%) patients.

Conclusion: Post-partum insertion of intra-uterine contraceptive device (IUCD) is associated with acceptable rates of complications. In present study bleeding occurred in 15.27% patients and expulsion occurred in 6.89% patients after post-partum insertion of IUCD.

Keywords: Post-partum intra-uterine contraception device (PPIUCD), Bleeding, Expulsion.

INTRODUCTION

Family planning of 2 years can reduce one third maternal mortality and 10% of infant mortality. Effective contraceptive method in post-partum period can prevent unplanned and closely spaced pregnancies. The intrauterine contraceptive device (IUCD), is one of the oldest and most advanced methods of contraception. The IUCD is a form of contraception that is extremely effective, safe, long acting, coitus independent, and reversible. IUCD can be effective for up to ten years for birth control.[1]

Previously IUCD was placed any time after 6 weeks of delivery which was associated with unplanned early pregnancy, reduced sensitization of the individual regarding contraception, additional hospital visits, more perception of early side effects like bleeding and cramping and more chance of heavy bleeding as compared topost-partum intrauterine contraceptive device (PPIUCD) insertion which is convenient and time saving.[2]

Post-partum IUCD placement is the method of insertion of IUCD immediately after placental removal. Its post placental when placed after normal vaginal delivery and intra cesarean when inserted during cesarean section. Post-placental IUCD is inserted within 10 minutes of expulsion of placenta. Intra-caesarean IUCD is inserted after removal of placenta.[3-7]

A study reported, among the complications bleeding was reported by 23.50% of the cases and expulsion rate was 8.99%.[5] While another study reported the rate of expulsion of IUCD was 3.6% (they reported no mode of delivery).[1] Moreover one more study reported bleeding after PPIUCD was 15.7% in females delivering vaginally or by cesarean section.[2] The rationale of this study is to document complications such as bleeding and expulsion rate of PPIUCD in our population.

MATERIALS AND METHODS

A total of 180 women in whom IUCD was inserted immediately after birth either normal delivery of cesarean section were included from August-2021 to April-2022. Females having gestational age 36–40 weeks, Hb ≥8 g/dl at time of delivery and willing to have PPIUCD after counseling before insertion were included. While patients having fever (100.4^0 F) during labor and delivery, patients with diabetes, having lower genital tract infections and those with ruptured membranes for >24 hours prior to delivery were excluded.

Prior to obtaining formal agreement, women were educated about the benefits and significance of family planning methods at antenatal visits and at the time of admission. The benefits and complications of PPIUCD were explained. Consent was received from individuals who opted for insertion. Demographic information like name, age, gestational history, and parity and contact details was obtained from all subjects. The PPIUCD was inserted within 10 minutes after placental delivery by senior gynecologist to avoid any bias. Patients were called for follow-up after 6 wks, 3 months and 4 months.10% enrollments was increased to compensate for lost to follow up. Complications of PPIUCD were measured in terms of bleeding and expulsion rate within 4 months of follow-up.

RESULTS

Mean age of patients was 28.86±4.83 years. Mean parity of females was 2.13±0.90. Regarding mode of delivery, there were 126 (70%) patients who underwent normal vaginal delivery. While remaining 54 (30%) patients underwent C-section.

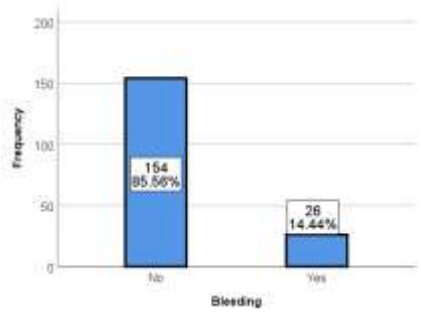

Figure 1: Frequency of Bleeding.

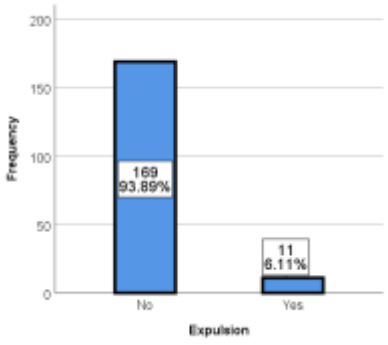

Figure 2: Frequency of Expulsion.

At the end of follow-up period, bleeding was found in 26 (14.4%) patients after IUCD insertion. While remaining 154 (85.6%) patients were having no bleeding (Figure 1).

Expulsion was found in only 11 (6.1%) patients at the end of follow-up. While remaining 169 (93.9%) patients were having IUCD at normal place (Figure 2).

DISCUSSION

Intrauterine contraceptive devices are used by over 180 million women worldwide. The growing need for reversible contraception would be well severed by increasing utilization of intrauterine contraception with the intrauterine device. The efficacy of modern IUCD in actual use is superior to that of oral contraception. Problems with IUCD use can be minimized to very low rate of minor side effects with careful screening and technique.[8]

Inserting an IUCD after delivery is a risk-free procedure, this has led to an increase in the number of women using IUCDs, which has helped meet previously unsatisfied demand. In contrast to the findings of earlier research, it was found that the rate of IUCD insertion was quite low. Both the vaginal and intra-cesarean methods of insertion were effective in terms of preventing pregnancy and posed no risk of problems. Vaginal insertion was also the safer of the two methods. Only strings of the IUCD are less likely to be evident at the follow-up appointment following a cesarean section in comparison to vaginal insertion. The PPIUCD was shown to be completely risk-free, since there were no cases of perforation, pregnancy with low rates of expulsion, pain in the abdomen, pelvic infection, or lost strings reported. When compared to vaginal insertion, the continuation rate for intra-cesarean insertion was significantly higher.[9,10]

PPIUCD is experiencing two issues right off the bat. Initial ejection rates following postpartum implantation are remain unacceptably high, ranging from 5 to 10 percent, despite the fact that they are lower than those following vaginal birth. This is the only time that an intrauterine device (IUD) is put into the uterine cavity under direct eyesight, and the use of the appropriate anchor has the potential to bring the expulsion rate very near to zero. Expulsion can be decreased to below 1 percent if a method is utilized to retain the IUCD in place within the uterus, in conjunction with treatments that involve suturing into the uterine muscle. This makes the process more complicated, and in most instances it necessitates additional training for the individuals who are inserting the devices.[11]

The second important issue is that there are some threads that are missing. Due to the fact that ultrasound is frequently unavailable in many GS settings, resolving this issue can be a time-consuming process that frequently requires referral to a tertiary facility. There are methods for extending threads to ensure that they are present in the vagina, but these methods frequently require clipping, which may entail an additional postpartum follow-up appointment. However, this is much simpler to carry out compared to referring a patient for an ultrasound. Regarding the development of this approach, the issue of missing strings following the insertion of PPIUDCS is of utmost relevance. There have been many different ways of approaching this issue in an effort to find a solution.[12,13]

In one investigation, vicryl was used to prolong the threads; however, the use of an absorbable material that assures the strings continue to be visible but, with time, absorbs so that they are not excessively lengthy could be a solution to the problem. These methodologies are among those that have the potential to broaden access not only in the general settings but also on a global scale.[14] Levi et al. investigated whether or not it would be possible to conduct a more extensive study that would evaluate the rates of expulsion for copper T380A IUDs that were inserted after cesarean deliveries.[15]

In present study, bleeding was found in 26 (14.4%) patients after IUCD insertion after 4 months of insertion of IUCD. A study conducted by Tmamy et al. reported bleeding rate of 14% after one month of insertion of IUCD and in 6.0% patients after 6 months of insertion of IUCD.[12] Another study by Mishra et al. found bleeding rate of 23.50% after IUCD insertion.[16]

In our study, expulsion occurred in only 11 (6.1%) patients at the end of follow-up. In a study that was conducted in China by Chi et al. in 1994, the expulsion rate of immediate PPIUCD was 25–37 percent, whereas the expulsion rate of post-placental PPIUCD was 9.5–12.5 percent. The PPIUCD will typically be expelled during the first several months after it has been implanted. Following insertion of an IUCD, there was an expulsion rate of 9.0 percent, according to a study that was carried out in Pakistan by Khanzada and colleagues.[17] Another study, conducted by Afshan et al., found that the rate of IUCD expulsion was 5% after 6 weeks of follow-up and 6% after 6 months of follow-up.[18] These rates are comparable to the findings of the current investigation.

The high rates of unintended pregnancies and close spacing between pregnancies in this nation emphasize the reality that the current approach to contraception and family planning is wasting a significant window of opportunity. Women are given a dependable and long-lasting method of birth control before they leave the hospital when an intrauterine device (IUD) is implanted during a cesarean delivery. Additionally, as the prevalence of cesarean deliveries rises, postpartum contraception may become more and more dependent on the placement of an intrauterine device (IUD) at the time of cesarean delivery.

CONCLUSION

Post-partum insertion of intra-uterine contraceptive device (IUCD) is associated with acceptable rates of complications. In present study bleeding occurred in 15.27% patients and expulsion occurred in 6.89% patients after post-partum insertion of IUCD.

REFERENCES

1. Kumar S, Sethi R, Balasubramaniam S, Charurat E, Lalchandani K, Semba R, et al. Women's experience with postpartum intrauterine contraceptive device use in India. Reprod Health. 2014;11(32):1-6
2. Singh S, Malik R, Ahalawat R, Taneja BK. Evaluation of efficacy, expulsion and safety of post-placental and intra-cesarean insertion of intrauterine contraceptive devices. Int J Reproduc Contracept Obstetr Gynecol. 2015;4(6):2005-9.
3. Blazer C, Prata N. Postpartum family planning: current evidence on successful interventions. Open Access J Contracept. 2016;7:53-67.
4. Dulli LS, Eichleay M, Rademacher K, Sortijas S, Nsengiyumva T. Meeting Postpartum Women's Family Planning Needs Through Integrated Family Planning and Immunization Services: Results of a Cluster-Randomized Controlled Trial in Rwanda. Glob Health Sci Pract. 2016;4(1):73-86.
5. Mishra S. Evaluation of Safety, Efficacy, and Expulsion of Post-Placental and Intra-Cesarean Insertion of Intrauterine Contraceptive Devices (PPIUCD). J Obstetr Gynaecol Ind. 2014;64(5):337-43.
6. 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(1):LC01-4.
7. Malik J, Das A, Rai P, Das S. Post placental copper-T 380A insertion after normal vaginal delivery and cesarean section and its clinical outcome. Int J Reprod Contracept Obstet Gynecol. 2016;5(7):2254-6.
8. Buhling KJ, Zite NB, Lotke P and Black K. Worldwide use of intrauterine contraception: a review. Contraception. 2014;89(3):162-173.
9. Goldthwaite LM, Cahill EP, Voedisch AJ, Blumenthal PD. Postpartum intrauterine devices: clinical and programmatic review. Am J Obstet Gynecol. 2018 Sep;219(3):235-241.
10. Rauh-Benoit LA, Tepper NK, Zapata LB, Whiteman MK, Curtis KM, Mandel MG, Marchbanks PA, Jamieson DJ. Healthcare Provider Attitudes of Safety of Intrauterine Devices in the Postpartum Period. J Womens Health (Larchmt). 2017 Jul;26(7):768-773.
11. Goldstuck ND, Wildemeersch D. Prevention of intrauterine contraceptive device expulsion and intolerance: Determination of the anchor mechanism. Clin Obstet Gynecol Reprod Med. 2017;3(1):1-8.
12. Tmamy EA, ELfttah AT, ELmohandes MI, Mohamed A. Prospective study of intraoperative intrauterine contraceptive device application during cesarean section. Egypt J Hospital Med. 2018;70(10):1627-31.
13. Kathpalia SK, Singh MK, Grewal DS. Nonpalpable intrauterine device threads: Is it a cause for worry? Med J Armed Forces India. 2017 Jan;73(1):85-87.

14. Ragab A, Hamed HO, Alsammani MA, Shalaby H, Nabeil H, Barakat R, et al. Expulsion of Nova-T380, Multiload 375, and Copper-T380A contraceptive devices inserted during cesarean delivery. Int J Gynecol Obstet. 2015;130(2):174-8.
15. Levi E, Cantillo E, Ades V, Banks E, Murthy A. Immediate postplacental IUD insertion at cesarean delivery: a prospective cohort study. Contraception. 2012;86(2):102-5.
16. Mishra S. Evaluation of safety, efficacy, and expulsion of post-placental and intra-cesarean insertion of intrauterine contraceptive devices (PPIUCD). J Obstet Gynecol India. 2014;64(5):337-43.
17. Khanzada B, Shahani MJ, Khanzada AK. Immediate postplacental insertion of intrauterine contraceptive device (copper 375) and its complications in term of expulsion, infection and perforation. Clin J Obstet Gynecol. 2018;1(1):082-6.
18. Afshan A, Asim SS. Immediate postpartum IUCD (PPIUCD) Insertion: An opportunity not to be missed. Ann Abbasi Shaheed Hosp Karachi Med Dent Coll. 2014;19(1):15-20.