



Research Article

Postpartum Intrauterine Contraceptive Device – A Follow up Study of Clinical Outcomes

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Abstract

Background: Intrauterine Contraceptive Devices (IUCDs) have been used by women in India for decades for spacing pregnancies and it is the most commonly used reversible method of contraception worldwide. IUCD can be inserted safely at any time during the first 48 hour after delivery, can also be inserted after 6 weeks postpartum. It can be removed whenever the individual desires and fertility returns immediately.

Objective: To study the acceptance rate and clinical outcomes of the Postpartum IUCD.

Material and Methods: A prospective study was conducted about immediate postpartum IUCD (IPPIUCD) insertions at MDM Hospital Jodhpur, Rajasthan and Follow-up clinic visits of women who reported for examination after 6 weeks of IPPIUCD insertion were analyzed.

Results: A total of 4378 deliveries occurred including vaginal and caesarean. PPIUCD inserted in 1264 women which shows acceptance of immediate PPIUCD in 28.87% of women. Perforation of uterus does not occurred in any woman. Unusual vaginal discharge was found in 12.5%, infection in 2.03% and irregular bleeding per vaginum in 11.56%. Expulsion of device occurred in 6.25%. Thread of IUCD string was not felt by 9.06% of women in subsequent visit.

Conclusion: The finding suggests that concept of PPIUCD is new in community and there is need to increase in level of awareness in the community by means of health education and counselling. PPIUCD can play a pivot role in country's family planning programme.

Keywords: Expulsion, Family planning, PPIUCD, Postpartum contraception.

Introduction

India being the second most populated country in world needs an effective family planning service to control the population growth. In India, 65% of women in the first year postpartum have an unmet need for family planning. Only 26% of women are using any method of family planning during the first year postpartum. 8% of the women desire to have another child within the next 2 years after

giving birth and are vulnerable to the risks of early pregnancy, for which immediate postpartum IUCD service became a Government of India approved program in 2010¹. Hence, the issue of spacing may be addressed during post-partum period by intrauterine contraceptive device.

Intrauterine contraception is the most cost-effective method of contraception today. Many women also find the IUCD to be very convenient;

because it requires little attention once it is inserted². The postpartum insertion of an IUCD is likely to bring about a revolutionary change in contraceptive use in the country³. IUCD can be inserted safely at any time during the first 48 hour after delivery, can also be inserted after 6 weeks postpartum (Extended PP) and after an abortion (Post Abortal)^{4,5}. It can be removed whenever the individual desires and fertility returns immediately⁶.

Insertion of IUCD in postpartum period has various benefits over interval insertion. Advantage includes high motivation with surety the woman being not pregnant. Postpartum insertion avoids the discomfort during interval insertion and insertion related bleeding will be masked by lochia². With a remarkably low failure rate of less than 1 per 100 women in the first year of use, the CuT-375 is on the topsider of contraceptives in terms of efficacy. Provision of IUCD in the immediate post-partum period offers an effective and safe method for spacing and limiting births¹. This retrospective study was done to determine the acceptance and clinical outcomes of the PPIUCD.

Material and Methods

Study Population

A prospective study was conducted about immediate postpartum IUCD (IPPIUCD) insertions at MDM Hospital Jodhpur, Rajasthan from January 2019 to June 2019 and Follow-up clinic visits of women who reported for examination after 6 weeks of IPPIUCD insertion were analyzed.

Inclusion Criteria- Women desire to use Copper T for Contraception and who are ready to come at follow up after 6 weeks.

Exclusion Criteria- Hemoglobin less than 8 gm%, Rupture of membranes more than 18 hours, Postpartum hemorrhage, Coagulation disorders, Fever, or clinical symptoms of infection during labor.

Methodology

The women included in the study underwent immediate postpartum insertion of Copper T 375 within 10 minutes of removal of placenta in vaginal and caesarean deliveries. The IUCD held by Kelley's forceps was introduced in the uterine cavity and placed at the fundus in the women delivering vaginally. In the case of caesarean section, IUCD was placed at the fundus in the uterine cavity through the lower segment incision. Post placental IUCD thread was not pushed into the cervical canal, and care was taken not to include the strings in the suture line. Uterine incision was closed routinely. At the time of discharge from the hospital, women were advised to come for follow-up after 6 weeks.

At the follow up visit the women were asked for excessive bleeding per vaginum, pelvic pain, foul smelling discharge and with protrusion of CuT thread. If strings were not visible, USG was done for confirmation of intrauterine IUCD. Clinical results were also measured.

Results

During the study period of six months from Jan-2019 to June-2019 total 4378 deliveries occurred including vaginal and caesarean. PPIUCD inserted in 1264 women which shows acceptance of immediate PPIUCD in 28.87% of women. Follow up lost in 624 women. So clinical results were measured in 640 women after six weeks of delivery at our hospital.

Table 1 Rate of acceptance of PPIUCD

Number of deliveries	No. of inserted PPIUCD	Percentage (%)
4378	1264	28.88%

In this study perforation of uterus not occurred in any woman. Unusual vaginal discharge reported in 80 (12.5%), infection in 13 (vaginitis in 10 and PID in 3) women present and irregular bleeding per vaginum in 74 women (11.56%). Expulsion of device occurred in 40 (6.25%) women. About 32 (5%) women wanted discontinuation of device. Thread of IUCD string not felt by 58 (9.06%) women in subsequent visit.

Table 2 Clinical outcome of PPIUCD at follow-up rate

Characteristic	Frequency	Percentage %
Safety		
1. Perforation	0	0%
2. Vaginal discharge	80	12.5%
3. Infection	13	2.03%
a) Vaginitis	10	1.56%
b) PID	03	0.46%
4. Irregular bleeding per vaginum	74	11.56%
Efficacy		
Pregnancy	0	0%
Expulsion	40	6.25%
Discontinuation	32	5%
Undescent IUCD String	58	9.06%

Discussion

IUCD is most effective method of birth spacing and population control in several developed countries in world including China but in India it is still struggling despite being a very effective long term contraceptive method. Women are most acceptable for IUCD or any form of contraception during immediate postpartum period.

In this study follow up lost in 624 women out of 1264 women about 49% because large number of rural women comes to our tertiary centre for delivery, for follow-up examination they prefer visiting their local health centres due to large distances and transportation problems. Our findings are in consistent with study conducted by Mohammad et al⁷ who also reported 26.8% of acceptance of PPIUCD.

In this study we found that there is no case of uterine perforation present in our study which is similar to study conducted by various authors⁸⁻¹⁰. This may be due to good selection and better management of the patients.

There is unusual vaginal discharge reported in 80 cases about 12.5 % of follow up women's with vaginitis in 10 about 1.56% women and PID in 3 women about 0.46% women found in this study. Our results are concordance with study done by Sudha. C.P. et al¹¹ who also found infection in 1.7% of women whom PPIUCD inserted.

In this study 74 women (11.56%) complaint of irregular vaginal bleeding. Aswathy et al on studying 126 patients with immediate PPIUCD found that 16 patients (14.7%) had menstrual problems in the form of irregular spotting and dysmenorrhoea, but only 5 patients (4.3%) had persistent menorrhagia at the end of one year¹², as we found the irregular bleeding in 6 weeks follow up postpartum period which may or may not related to PPIUCD and for which longer follow up period study needed. A study conducted by Gupta et al¹³ observed bleeding in 4.3% of the cases where as Shukla et al¹⁰ indicated a higher rate of 27.2%.

In this study we found that expulsion of device occurred in 40 (6.25%) women with expulsion rates for immediate postpartum IUD insertions are higher than for interval or post abortion insertions, vary by study, and may be as high as 10–27% . Despite the higher expulsion rate of immediate postpartum IUD placement over interval placement, evidence from clinical trials and from cost-benefit analyses strongly suggest the superiority of immediate placement in reduction of unintended pregnancy, especially for those at greatest risk of not having recommended postpartum follow-up¹⁴.

Our results concordant with the study conducted among 210 women in a clinic in Hubli, who reported 5.6%¹⁵ and in abroad 1.6% among 3000 women in a hospital in Paraguay¹⁶, and 5.6% among women among 305 periurban Lusaka, Zambia¹⁷.

About 32 (5%) women wanted discontinuation of device in our study. The reason for discontinuation varies from person to person including the lack of awareness and education about IUCD devices and normal physiological changes during postpartum. A significant number of women declined PPIUCD because of partner's non-involvement. This reveals the importance of partner involvement during counselling and decision making.

In this study thread of IUCD string not felt by 58 (9.06%) women in subsequent visit. Various

studies about malpositioned IUCD have suggested that incidence of lost strings from PPIUCDs to vary from 5.3% to as high as 24%. The majority (91.8%) of lost strings curl inside the cervical canal and can easily be found¹⁸. A study conducted by Kapp et al reported missing string rate in interval IUCD insertion to be 15.6%¹⁹. Expansion of access to PPIUDs in India may provide an opportunity to address the high proportion of births with short intervals and improve maternal and child health outcomes.

Conclusion

Immediate postpartum IUCD has the potential to reduce unintended and short-interval pregnancy. Woman is most acceptable for contraception in post partum period so Obstetrician–Gynecologist and other obstetric care providers should incorporate immediate postpartum IUCD into their practices, counsel women appropriately about advantages and risks for better implementation of population control and safe motherhood policy in India.

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