Journal of Cardiovascular Disease Research

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 10, 2023

Original research article

A study on safety, complications and expulsion rates of immediate post placental insertion of IUCD

[1]Dr. Laxmi Itagi, [2]Dr. Syeda Zohra Jabeen, [3]Dr. Harini R

[1]Associate Professor, Department of OBG, MR Medical College, Kalaburagi, Karnataka, India

[2]Post Graduate, Department of OBG, MR Medical College, Kalaburagi, Karnataka, India

[3]Assistant Professor, Department of OBG, Nandi Medical College and Research Institute, Chikkaballapur, Karnataka, India

Corresponding Author:
Dr. Laxmi Itagi

Abstract

The current national strategy in India is for increasing IUCD uptake. The available target to cover with PPIUCD as a method of contraception has expanded in the recent past; since there is a 10 fold increase in women delivering in hospitals due to maternity benefit scheme. On reviewing the literature little Indian data and few studies were found regarding post placental insertion of IUCD. The copper T was inserted with all aseptic precautions within 10 minutes of placental expulsion with Kelly's forceps. Strings cut to the level of the cervix (In Cu T 375 where thread is long, compared to Cu T 380 A). Proper placement in the uterine cavity was confirmed by ultrasound at 6 weeks Post placental delivery insertion of PPIUCD. Study observed that; in majority of patients i.e. 75 (75.0%) Cu T thread was noted and in 22 (22.0%) of patients Cu T thread was not seen on per speculum examination. Expulsion was seen in 4% of patients, one patient expelled on POD 2, one patient expelled on POD 18 and two patients expelled at 6 weeks. In expelled patients there were 3 Multipara's and 1 primipara. Pelvic pain was seen in 8 (8.0%) patients-caesarean 4, vaginal 4 and perforation was not seen in of the patients.

Keywords: IUCD, Complications, expulsion rates

Introduction

Immediate post-partum IUCD insertion is common in a number of countries. These include China, Mexico, and Egypt, where intrauterine contraception is popular. Clinical experience in these diverse settings confirms the practicality of this approach [1].

In developing countries like India, immediate insertion of an IUCD after the delivery of placenta provides an important opportunity to address the need for contraception as there is lack of awareness among the women, lack of family planning services and the postpartum period may also be a convenient time during a woman's life to have an IUCD inserted, since it may be one of the few times she is in contact with medical services [2]. For many women, it would be convenient to leave the hospital after delivery already protected against unplanned pregnancy, since no show rates at interval of 6 weeks postpartum may be high, patients may become pregnant before visit. And as a contraceptive used during the postpartum period, the IUCD has a distinct advantage [3]:

- High motivation.
- Assurance that woman is not pregnant.
- No effect on the quantity and quantity of breast milk, as do many systemic contraceptive methods.

In contrast, women waiting for IUCD may experience an unintended pregnancy or never return for the insertion [4].

The current national strategy in India is for increasing IUCD uptake. The available target to cover with PPIUCD as a method of contraception has expanded in the recent past; since there is a 10 fold increase in women delivering in hospitals due to maternity benefit scheme [14]. On reviewing the literature little Indian data and few studies were found regarding post placental insertion of IUCD. Hence this study was carried out to evaluate safety, complications and expulsion rates of immediate post placental insertion of IUCD [5, 6].

Methodology

Study design: Prospective interventional study.
Sample size: 100.

Inclusion criteria

All parous women irrespective of age who underwent Caesarean section or normal vaginal delivery.

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 10, 2023

Exclusion criteria

1. PROM of >18 hours
2. Hemoglobin <8g/dl
3. Chorioamnionitis
4. Congenital malformations of uterus
5. Any bleeding disorder or unknown cause of vaginal delivery
6. Diabetes mellitus
7. Fibroid uterus
8. Previous ectopic pregnancy
9. Cardiac disorders

Method of insertion

Post placental insertion following vaginal delivery

1. Bimanual examination was performed to evaluate the cervix and the uterus after the delivery of the placenta and ensured empty cavity with contracted uterus.
2. IUCD removed from insertion device and positioned at the edge of a sterile PPIUCD inserting forceps/ Kelly's forceps with a slight angle.
3. Anterior lip of cervix held with sponge holding forceps.
4. Uterus was stabilised by firm pressure over the abdomen.
5. The copper T was inserted with all aseptic precautions within 10 minutes of placental expulsion with Kelly's forceps. Strings cut to the level of the cervix (In Cu T 375 where thread is long, compared to Cu T 380 A).
6. Proper placement in the uterine cavity was confirmed by ultrasound at 6 weeks post placental delivery insertion of PPIUCD.

Insertion intra-caesarean section

- After placental delivery and controlling bleeding, uterus was massaged till firm and bleeding reduces.
- IUCD was placed at the fundus with artery forceps or digitally.
- The strings were placed in the lower uterine segment guiding towards the os before closing the uterine incision.

Follow up

Follow up was done at/after 6 weeks at outpatient department. Following details were obtained:

- History regarding-pain abdomen, excessive PV bleeding/PV spotting, pelvic pain and regarding the strings of the IUCD.
- Findings of per speculum inspection to note for strings, presence of foul smelling discharge and per vaginal examination findings for evidence of pelvic inflammatory disease.

Results

Table 1: Per speculum examination at 6 weeks follow-up

Per speculum examination	No. of patients	Percentage
Cu T thread noted	75	75.0
Cu T thread not seen	22	22.0
Long Cu T thread seen	3	3.0
Total	100	100.0

Study observed that; in majority of patients i.e. 75 (75.0%) Cu T thread was noted and in 22 (22.0%) of patients Cu T thread was not seen on per speculum examination.

Table 2: Distribution of patients according to complications

Complications		No. of patients	Percentage
Perforation	No	100	100.0
	Yes	0	0.0
Expulsion	No	96	96.0
	Yes	4	4.0
Secondary PPH	No	100	100.0
	Yes	0	0.0
Sub-involution	No	100	100.0
	Yes	0	0.0
Pelvic pain	No	92	92.0

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 10, 2023

	Yes	8	8.0
Missing strings	No	78	78.0
	yes	22	22.0
PID/Infections	No	100	100.0
	yes	0	0

Study observed that 78% of patients had not miss the string and 22% of patients had missing string of Cu T.
Expulsion was seen in 4% of patients, one patient expelled on POD 2, one patient expelled on POD 18 and two patients expelled at 6 weeks.
In expelled patients there were 3 Multipara's and 1 primipara.
Pelvic pain was seen in 8 (8.0%) patients-caesarean 4, vaginal 4 and perforation was not seen in of the patients.
There was no secondary PPH, PID/infections or subinvolution during the study.

Table 3: Distribution of patients according to USG findings at 6 weeks

USG findings at 6 weeks	No. of patients	Percentage
IUCD noted *in situ*	96	96.0
Displaced Cu T	3	3.0
No IUCD visualised (Cu T expelled)	1	1.0
Total	100	100.0

Study observed that; majority of patients 96 (96.0%) had IUCD *in situ* as per USG.
3 (3.0%) of patients had displaced Cu T and in 1 patient there was no IUCD noted.

Table 4: Expulsion of Cu-T w.r.t mode of delivery

Mode of delivery	No. of patients expelled	Percentage
Vaginal delivery	0	0
Caesarean section	4	100%

Discussion

Table 5: Comparison of studies showing complication rates in different groups

Author	No of patients	Type of study	Follow up period	Complication rate
Gupta *et al*. (2013) [7]	450	Prospective observational	6 months	32%
Celen *et al*. (2011) [8]	325	Prospective interventional	6 months	27.2%
Present Study	100	Prospective interventional	6 weeks	25%

In our study there were 3 expulsions of copper T accounting for 3% of total patients. One patient had expulsion on Post op day 2 during hospital stay, one patient on Post op day 18 when she came for follow up for long thread per vagina and one patient at 6 weeks when she came for regular PPIUCD follow up. Table no 18 shows Comparison of expulsion rates of our study with different studies.

Table 6: Comparison of expulsion rates

Author	No. of patients in study	Type of study	Follow up period	Expulsion rate
Gupta *et al*. (2013) [7]	450	Prospective observational	6 months	8.6%
Shashikant *et al*. (2016) [9]	611	Prospective observational	6 months	18%
Katheit *et al*. (2013) [10]	397	Prospective	6 months	10.5%
Present study	100	Prospective interventional	6 weeks	4%

Conclusion

- In the present study expulsion rate was 4% and was found to occur within 6 weeks.
- Maximum expulsions were found in multipara's i.e. 75%
- The complications occurred mainly during the follow up visit i.e. at 6 weeks and few after the study period.
- Missing strings were noted in 22% women accounting for the most common complication.

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 10, 2023

References

1. Lopez- Farfan JA, MacIel- Martínez M, Velez- Machorro IJ. Vazquez- Estrada L. Application of Mirenaan® during Caesarean Section (CS). European Journal of Contraception and Reproductive Health Care. 2010;15(1):165- 6.
2. El-Beltagy NS, Darwish EA, Kasem MS, Hefila NM. Comparison between Cupper T380 Iud and Multiload 375 Iud in Early Post- Partum Insertion. Middle East Fertility Society J. 2010;16:143- 8.
3. Elsedeek MS. Puerperal and menstrual bleeding patterns with different types of contraceptive device fitted during elective cesarean delivery. Int. J Gynaecol. Obstet. 2011-2012 Oct;116(1):31-4.
4. El-Beltagy NS, Darwish EA, Kasem MS, Hefila NM. Comparison between Cupper T380 IUD and Multiload 375 IUD in early post-partum insertion. Middle East fertility Society Journal. 2011;16,143-148.
5. Divya, Rupali Dewan. Clinical outcome of post placental copper T380A and copper 375 IUCD insertion in women delivering by caesarean section. Int. J Reprod Contracept Obstet gynecol. 2018 Sep;7(9):3731-3737.
6. Welkovic S, Costa LO, Faúndes A, De Alencar Ximenes R, Costa CF. Post-partum bleeding and infection after post-placental IUCD insertion. Contraception. 2001;63:155-8.
7. Abhilasha Gupta, Aruna Varma, Jyoti Chauhan. Evaluation of PPIUCD versus interval IUCD (380A) insertion in a teaching hospital of Western U.P. Int. J Reprod. Contracept. Obstet. Gynecol. 2013 Jun;2(2):204-208.
8. Şevki Çelen, Ayhan Sucak, Yasemin Yıldız, Nuri Danışman. Immediate post-placental insertion of an intrauterine contraceptive device during cesarean section. Contraception. 2011;84:240-243.
9. Shashi Kant, Archana S, Arvind Kumar Singh, Farhad Ahamed, Partha Haldar. Acceptance rate, probability of follow-up, and expulsion of postpartum intrauterine contraceptive device offered at two primary health centers, North India. J Family Med Prim Care. 2016 Oct-Dec;5(4):770-76.
10. Katheit G, Agarwal J. Evaluation of post-placental intrauterine device (PPIUCD) in terms of awareness, acceptance and expulsion in a tertiary care centre. International journal of Reproduction, Contraception, Obstetrics and Gynecology Katheit G *et al*. Int. J Reprod Contracept Obstet Gynecol. 2013 Dec;2(4):539-543.