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A STUDY OF THE COMPLICATIONS OF IMMEDIATE POST- PARTUM IUCD INSERTION

Kavitha N.S., Latha K and Jayashree V

Department of Obstetrics and Gynaecology, Rajah Muthiah Medical College and Hospital, Annamalai University, Annamalai Nagar – 608 002

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A B S T R A C T

Background: More than half of Indian women in the first year post-partum wish to use a family planning method, but only one fourth is utilizing any method. This study was done to assess the complications of immediate postpartum insertion of intrauterine contraceptive device with the aim to offer a more effective postpartum family planning method.

Study Setting: Rajah Muthiah Medical College and Hospital, Annamalai University, Chidambaram.

Study Design: A prospective longitudinal study.

Methods: The women who choose to have a postpartum intrauterine device insertion (Cu T 380A) were counselled and device inserted within 48hrs postpartum. Follow up is done at 4 weeks for complications and client satisfaction.

Results: Of the 75 subjects in the study group, there were 8 intracaeserean insertions and 69 transvaginal insertions. Expulsion of the device was found to be a significant complication in this study. The total expulsion rate was 12.12% in the whole study group. There was no expulsion in the subjects who had intracaeserean insertion. All the expulsions were among those in the transvaginal route, which was 12.12% (p value, 0.003). At the end of 4 weeks follow up, of the total % of the subjects who continued with this method, thread of the device was not visible in 12.12%.

Conclusions: Immediate postpartum CuT380A is a method of family planning with good client satisfaction especially intracaeserean insertion which had less expulsion rate than transvaginal

INTRODUCTION

India is the second most populated country in the world after china with an estimated total population of 1.26 billion.(1) India's maternal mortality ratio stays at an alarming figure of 254/100000 live births, which cause 117000 women to die from pregnancy and child birth complications every year.(2) This contributes to 20% of global maternal deaths.

A woman who becomes pregnant soon after a previous childbirth faces the risks of anemia, abortion, preterm labour and maternal death. A baby born after short birth interval has increased chances of being born preterm, small for gestational age and neonatal death. About 65% of the woman in the first year postpartum have an unmet need for family planning, while only 26% of women are using any family planning method in the first year of post-partum.(3)

It should be possible for health care providers to offer a family planning method to the mother in her immediate postpartum period, which should be reversible, with fewer complications, not with increased morbidity, not interfering with breast feeding and having longer duration of action.

Intra uterine contraceptive devices have been used in India for decades for spacing pregnancies. CuT 380A is a highly effective device approved by government of India with an

Corresponding author:* **Kavitha N.S
Department of Obstetrics and Gynaecology, Rajah Muthiah Medical College and Hospital, Annamalai University, Annamalai Nagar – 608 002

effective protection period up to 10 years. The government of India has initiated immediate postpartum family planning services by insertion of CuT 380A with more than 8000 postpartum intrauterine device (PPIUCD) having been inserted.(4)

Though it is well accepted the effectiveness of CuT 380A, it is not studied with diligence of the complications upon insertion and the satisfaction to the mother. In India a higher rate of expulsion of PPIUCD is noted (8-14%), but with good technique, the expulsion rate comes down to around 5%.

This present study intends to look into the complications associated with immediate postpartum IUCD insertion in a cohort of women in Rajah Muthiah Medical College and Hospital, Chidambaram a tertiary level teaching hospital.

MATERIALS AND METHODS

The study group included 75 women who delivered in Rajah Muthiah Medical College and Hospital, Chidambaram who are willing for immediate PPIUCD insertion. The device was inserted in the immediate postpartum period (within 48hours of delivery or intra-caesarean) after adequate counselling and getting written informed consent.

Inclusion Criteria

1. Parturients planning to stay in the area for atleast a month postpartum therefore could conveniently return for follow up.
2. A women delivering vaginally or by caesarian section, counseled for IUD insertion in prenatal period or in labour and willing to participate in the study.

Exclusion Criteria

- Fever during labor and delivery
- Who had active STD or other lower genital tract infection or are at a high risk for STD
- Known to have ruptured membranes for greater than 24 hours prior to delivery
- AIDS - Advanced stage, not well on antiretroviral therapy
- Known uterine abnormalities e.g. uterine myomas
- Manual removal of the placenta
- Antepartum, intrapartum or postpartum hemorrhage or any evidence of postpartum uterine atony which necessitated use of oxytocic agents for control
- An allergy to copper

Insertion Technique: Insertion of the device as one either transvaginally or intra caeserean.

Transvaginal Insertion: IUCD was inserted under aseptic precautions using Kelly's forceps. Cervix is visualized using Sims speculum and the area is wiped with povidone iodine solution. The anterior lip of cervix is held with sponge holding forceps, IUCD is taken out of the pack using Kellys forceps by no touch technique and inserted gently into the lower uterine cavity without touching vaginal wall. The left hand of the inserter is used to push the uterus transabdominally upwards to reduce the angle between uterus and vagina. The Kellys forceps is then gently moved up in the uterus holding the IUCD firmly until the resistance of the fundus is reached. The IUCD is then released at the fundus and the Kellys forceps is carefully removed by sweeping it towards the sidewall of the uterus taking care not to dislodge the inserted device. The cervical os is again examined.

Intracaeserean Insertion: After the removal of placenta the IUCD is held between index and middle finger and placed through the uterine incision into the fundus. The thread of the device are placed in the uterine cavity and not pushed into the cervical canal, ensuring that it is not caught in the uterine sutures.

Follow Up

These women were followed up at 4 weeks postpartum. Symptoms regarding vaginal bleeding, abdominal pain and infection (fever, abdominal tenderness, and vaginal discharge) were looked for. All women were again counselled about the possible complications of IUCD and to identify the expulsion of the device. Ultrasound examination was done in cases where the thread of the device was not visible.

The study tool utilized were a questionnaire, to be answered by the women. During the follow up, clinical examination was done, laboratory investigations and ultrasound examination in indicated cases. All the observations were recorded. Study variables were age, parity, socioeconomic status, complications and client satisfaction.

The data were statistically analyzed using the software statistical package for social sciences (SPSS) version 16.0 for windows. Data was analyzed using Chi square test and Fischer's exact test. P value <0.05 was considered to be statistically significant.

RESULTS

The total number of subjects included in the study was 75. 46.7% of them were of age 21-25 years. 4% were of age <20 years. 32% subjects in the group were of parity two, 20% parity three and 12% parity four. 92% subjects in the study group had delivered vaginally and 8% delivered by caesarean section.

However, 17 women complained of heavy bleeding during menstruation. In our study out of 66 patients which were followed up at 4 weeks 25.76 % patients complained of menorrhagia out of which 1.51% occurred in intracaesarean group and 19.69% occurred in post placental group, 4.54% occurred in Immediate Postpartum group with the p value of 0.621 which shows no significant difference between the groups. They were given mefanamic acid (250 mg TDS) during this period and were informed about the fact that bleeding during initial two or three menstrual cycle can be heavy due to IUD. But 2 women were not willing to continue. Therefore, IUDs were removed in them. The remaining 15 women responded to the treatment and continued with IUD as a contraceptive method (Table1).

Table 1 Menorrhagia (n=66)

Time of Insertion	N	%
Post Placental	13	19.69
Immediate Postpartum	3	4.54
Intra Caesarean	1	1.51
Total	17	25.75

Out of total 66 subjects, 8 (12.12%) had expelled the device (Table 2). All of them had transvaginal insertion of IUCD. No cases of expulsion in intracaesarean group. None of them was not aware of the expulsion, which was identified during follow b up at 4weeks.

Table 2 Expulsion(n=66)

Time of Insertion	No of patients	%
Post Placental	2	3.03
Immediate Postpartum	6	9.09
Intra Caesarean	0	0
Total	8	12.12

Of the 66 subjects, 5 (7.57%) requested to remove the IUCD due to various reasons even after reassurance. 2 of them were due to excessive vaginal bleeding, and 3 decided for permanent sterilization (Table 3).

Table 3 Removal rate(n=66)

Cause	No. of patients	%
Cultural factors	2	3.03
Go for sterilization	3	4.54

At 4 weeks follow up, 82.7% of the subjects continued with their device.12.12% IUCD thread was not visible at 4weeks in the vaginal delivery group. Ultrasonography was done in all these subjects to confirm the presence of IUCD (Table 4).

Table 4 Missing threads (n=66)

Type of insertion	No. of patients	%
Post placental	2	3.03
Immediate Postpartum	6	9.09
Intra Caesarean	0	0
Total	8	12.12

Among 66 patients who came for follow up at 4 weeks postpartum 22.71% cases came with complains of pain in lower abdomen out of which 16.66% cases were those in which PPIUCD was inserted during postplacental period, and 4.54 % cases were those in which PPIUCD was inserted during immediate postpartum period and 1.51% cases were those in which PPICUD was inserted during intra caesarean. Out of 15 patients who came with pain abdomen at 4 weeks postpartum, all patients were given analgesics and were relieved of pain and were willing to continue PPIUCD.

3subjects had features of infection during the study period and were treated with antibiotics.

None of them had pregnancy during this period. However duration of 6 months is inadequate to comment upon this aspect. (Table 5).

Table 5 Vaginal discharge

Time of Insertion	N	%
Post Placental	1	1.51
Immediate Postpartum	2	3.03
Intra Caesarean	0	0
Total	3	4.54

DISCUSSION

The objective of this study was to identify the complications of immediate postpartum insertion of IUCD. This would further allow an appropriate, reversible and long term family planning option for women before returning home after delivery. The woman is most receptive to family planning methods while in her antenatal period prior to delivery. The postpartum period is a convenient time to have an IUCD inserted, since she is under medical care.

Throughout the period from 2004 to 2009 the age group 20 – 24 continued to have a peak fertility rate, with the Age Specific Marital Fertility Rate reaching 326 in 2009 from 303 in 2008.[5] This shows the significance of an effective contraceptive method during this period.

Expulsion of the device was a significant complication of PPIUCD which was more with the vaginal route of insertion than intracaeserean insertion. Missing thread is a common problem following PPIUCD insertion particularly when inserted during vagainal delivery. Infection can be avoided by following strict aseptic precautions during insertion.

In this study there was no case of uterine perforation or misplacement of IUCD. Incidence of uterine perforation can be reduced with good technique of insertion.

PPIUCD do not interfere with the normal physiological events in the immediate postpartum period. The occurrence of abdominal pain and bleeding may lead to removal of IUCD. The subjects who had intracaeserean insertion were more satisfied than the others after PPIUCD insertion.

Kittur *et al* has shown that 86.2% of subjects in their study were satisfied with the PPIUCD insertion.(6) In the present study patients were satisfied with immediate postpartum IUCD insertion. Those who had intracaeserean insertion were more satisfied with this method than vaginal delivery group. Good communication and adequate counselling are the keystones to postpartum insertion of IUCD.

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