Original Research Article - Obstetrics

Study of Effects of Post Placental Intrauterine Contraceptive Device (IUCD) Insertion during Cesarean Section

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Abstract

Background: Adverse maternal and perinatal outcomes are related to pregnancies spaced too closely together. Present study was to see the effects of post placental IUCD insertion during cesarean section.

Methods: The study was conducted in the Department of Obstetrics and Gynecology, Agartala Government Medical College over 1.5 Years (January 2016-June2017). All cases at term pregnancy delivering by cesarean section were taken for this study. Sample size of 105 was taken. Subjects were recruited from-obstetrics OPD and casualty of Agartala Government Medical College (AGMC) and GB Pant Hospital and evaluated for expulsion and complications. Evaluation is done at the end of six months, one year and one and half year.

Results: Common complications were bleeding per vagina 8 (7.7%) and pain abdomen 8 (7.7%). Expulsion rate was 3.8%. 53 (53%) subjects continued with IUCD. Two cases reported with pregnancy (one intrauterine and another ectopic).

Conclusions: The complications associated with postplacental IUCD insertion is insignificant, still the awareness, acceptance and continuation are very low. Therefore information, education, communication activity by the field workers must be enhanced to overcome this knowledge gap.

Introduction

Adverse maternal and perinatal outcomes are related to pregnancies spaced too closely together. Closely spaced pregnancies is associated with an increased risk of induced abortion, miscarriage, neonatal death, premature birth, placental abruption, low birth weight, congenital disorders, schizophrenia and autism.

Pregnancy interval of five years or more is associated with an increased risk of high blood pressure and signs

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of damage to another organ system, often the kidneys.[1] Family planning during the first year postpartum has the potential to reduce a significant proportion of these unintended pregnancies as women experience a large UNMET NEED for family planning during this time.2

PPIUCD is employed in this study as a definitive method of post-partum contraceptive device as

- It is safe to use as it is certain that the woman is not pregnant at the time of insertion,
- There is minimal risk of perforation because of thick wall of uterus, there is reduced perception of initial side effects (bleeding and cramping).
- No effect on breastfeeding and Inserting IUCD in the immediate post partum period saves time for both the woman and the provider as the procedure is conducted in the same setting and involves only a few minutes of additional time.[3]

This study has been done to evaluate the complications of post placental IUCD insertion during caesarean section among women delivering in Agartala Government Medical College and at the same time benefit the female population of the state with long acting reversible contraception.

Objective of present study was to evaluate the expulsion rate and complications in post placental IUCD insertion during cesarean section.

Methods

This study was a prospective study conducted in the Department of Obstetrics and Gynecology, Agartala Government Medical College over 1.5 Years (January 2016-June 2017). All cases at term pregnancy delivering by cesarean section were taken. Sample size of 105 was taken. Subjects recruited from - Obstetrics OPD and Casualty of Agartala Government Medical College and GB Pant Hospital.

Exclusion criteria

- Patient with Hb<8 gm%,
- Ruptured membranes >18 hours prior to delivery,
- Chorioamnionitis,
- PPH.

All registered women were first counseled during antenatal period, consent was taken and PPIUCD inserted after removal of placenta and membranes. Thereafter study subjects were asked to follow up at six months, one year and one and half year to evaluate expulsion rate and complications.

Statistical analysis testing was conducted with SPSS 15.0 and Microsoft Excel software.

Results

In this study, stipulated sample size was 105. 130 subjects were counseled. But 105 subjects accepted this method (Table 1).

Table 1: Selection of study subjects

Total counseled (N)	130
Total accepted (N)	105

Table 2: Socio-demographic factors distribution in the study subjects

	N	%
AGE		
<20	12	11.4
21-25	52	49.5
26-30	27	25.7
31-35	10	9.5
>35	4	3.8
PARITY		
1	87	82.9
2	15	14.3
>2	3	2.9
RELIGION		
Hindu	92	87.6
Muslim	4	3.8
Christian	9	8.6
EDUCATION		
No formal education	11	10.5
Primary stage	13	12.4
Middle stage	14	13.3
Secondary stage	47	44.8
Senior secondary stage	15	14.3
Undergraduate	5	4.8
OCCUPATION		
Housewife	91	86.7
Employed	14	13.3
SOCIOECONOMIC STRATA		
Upper	1	1
Upper middle	0	0
Lower middle	14	13.3
Upper lower	57	54.3
Lower	33	31.4

Table 2 shows distribution of socio-demographic factors among women accepting PPIUCD is 79% in the age group of 21-30 years.

In this group 87% of women were primiparous, 92% of women were Hindu, followed by Christian 9% and Muslim 4%. Educational qualification of almost 50% study subjects were upto Secondary Stage, followed by Senior Secondary >Middle Stage >Primary Stage >No Formal education >Undergraduate. 57% and 41.8% of study subjects belonged to upper lower socioeconomic strata while 1% belonged to upper socioeconomic strata.

Table 3: Complications at 6th month, 12th month and 18th month.

	At 6th month		At 12th month		At 18th month	
	N	%	N	%	N	%
Pain Abdomen	5	4.8	3	2.85	1	1
Bleeding	3	2.9	4	3.8	1	1
Expulsion	2	1.9	0	0	2	1.9
Pregnancy	0	0	0	0	2	1.9
Infection	0	0	0	0	2	1.9
No complications	80	76.2	69	65.7	58	55.2
Lost to follow up	15	14.3	29	27.6	37	35.2

Table 3 shows complications at sixth month, one year and one and half year.

Most complications at the end of 6th month was pain abdomen (4.8%). At the end of one year bleeding was the most common complication i.e. 3.8%.

The most common complication at the end of One and Half year is expulsion (2 cases), followed by infection (2 cases), pregnancy (2 cases), bleeding and pain abdomen (1 case each). 37 cases either lost to follow up or had Copper T (CuT) removed.

Table 4: Awareness about PPIUCD in the study subjects

AWARENESS	N	%
Aware	37	35.2
Not aware	68	64.8
Total	105	100.0

Table 4 shows awareness about PPIUCD is very low (35%).

Table 5: Outcomes of PPIUCD insertion after caesarean section

OUTCOMES	N	%
Satisfied	56	53.3
Removed for bleeding	8	7.6
Removed for pelvic pain	5	4.8
Removed for pressure from family	1	1.0
Removed for string problems	0	0.0
Removed for vaginal discharge and pruritis	1	1.0
Removed for pelvic infection	2	1.9
Removed for failure of contraception	2	1.9
Removed as husband/child expired	0	0.0
Expelled spontaneously	6	5.7
Not known/lost to follow up	24	22.9
Total	105	100.0

Table 5 shows outcome of the study. 53.3% were satisfied with its use, 8 (7.5%) cases had it removed for bleeding, 2 cases (1.9%) had it removed for pelvic infection, 1 (1%) had it removed for pressure from family, 1 (1%) had it removed for vaginal discharge and purities vulvae, 2 (1.9%) conceived with Copper T in situ, in 6 (5.7%) cases it got expelled spontaneously. 24 (22.9%) cases lost to follow up.

Table 6 shows 53% continued in this group.

Table 6: Continuation of PPIUCD in the study

	N	%
Removal at 6 months	7	7.00
Removal at one year	9	9.00
Removal at one and half year	8	8
Continued	53	53
Lost to follow up	23	23.00

Discussion

Women soon after delivery are highly motivated and intend for an effective contraception method while if the women are advised to initiate contraception after 6 weeks of their delivery, they may have higher chances of conception and do not manage to come back.

In this study, majority (52%) of woman accepting PPIUCD belonged to age group of 21-25 years, which is similar to study conducted by Sujanendra et al and Katheit G et al, furthermore amongst women accepting PPIUCD, 87% were primiparous, this finding is consistant with study conducted by Sujanendra et al, but contrary to these studies Grimes et al, Sukla et al, and Deshpande et al where they found higher acceptance in multiparous client.[4,8] The reason for lower acceptance for PPIUCD in our study among para 2 or more was that they underwent tubectomy. In this study, acceptance of PPIUCD was higher among women with secondary stage education

and senior secondary stage education i.e. 47% and 15% respectively than those with no formal or higher education i.e. 11% and 5%, similar to study conducted by Sujanendra et al and 57% of present study subjects belonged to Upper Lower Socioeconomic strata.[4]

In this study, follow up visits were conducted at 6th month, 12th month and 18th month and complications noted 105 subjects in Cesarean Section. Pain was reported as 5%, 3% and 1% in this group at the end of 6 months, 12 months and 18 months respectively. Total 7.9% i.e. 8 cases had pain abdomen. Out of which 5 cases insisted removal, rest 3 cases continued with it and pain subsided with intake of Analgesics. Similar to study performed by Katheit G et al where minor abdominal pain consisted of 12.5% of all complications. Follow up at 6 months, 1 year and one and half year 3 (2.9%), 4 (3.8%), 1 (1%) cases of bleeding per vagina following Intracesarean PPIUCD. So at the end of one and half year, 8 cases (7.8%) of bleeding per vagina in this group were recorded. All of them were prescribed with combination of tranexamic acid and mefenamic acid thrice daily for 5 days but 7 of them had it removed from other private centers. In other studies, 23.5% and 17.79% of clients had bleeding. Infection rate was 0, 0, 2 cases after intracesarean PPIUCD. Infection was on basis of abdominal pain associated with fever and foul-smelling vaginal discharge. Similar to study conducted by Ranjana et al, in my study, 2 cases i.e. 1 intrauterine and 1 extrauterine pregnancy with IUCD in situ was reported after one and half year in this group.[10] The case reporting with intrauterine pregnancy at 16 weeks of gestation termination of pregnancy was done with Copper T removal, and Laparotomy followed by salpingectomy with Copper T removal was done with the one with tubal pregnancy. Present study shows expulsion rate as 2 (1.9%), 0, 2 (1.9%) at 6th, 12th, 18th month in this group. In this study, expulsion with intracesarean insertion i.e. 3.8%. In my study expulsion was detected by history, clinical examination and pelvic ultrasonography. These women were informed about IUCD expulsion and were advised to use alternative method of contraception. According to Chi et al, expulsion rate of PPIUCD at 4 weeks interval was 9.5-12.5%.[11] In this study, 8 (7.6%) removed for bleeding, 5 (4.8%) removed for pelvic pain, 1 (1.0%) removed for pressure from family, 0 removed for string problems, 1 (1%) removed for vaginal discharge and pruritis, 2 (1.9%) removed for pelvic infection, 2 (1.9%) removed for pregnancy with IUCD inn situ, 0 removed as husband or child expired, in 6 (5.7%) cases it got expelled spontaneously following Caesarean section. Continuation rate is 57% following Caesarean section. In contrast to other studies where continuation rate ranges from 62-82%, the continuation rate in my study is very low.[10,11]

Conclusion

The complications associated with Postpartum Intrauterine Contraceptive Device is insignificant, still the awareness, acceptance and continuation are very low. Therefore, the Information Education Communication activity by the field workers must be enhanced to overcome this knowledge gap & in the long run this will improve the acceptance of Contraceptives especially the IUCDs in the general population.

Acknowledgments

Authors would like to thank Dr. Jayanta Ray, Prof. Mamata Pradhan, who has been a continuous support and constant supervision.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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gratefully acknowledges the generous contribution
to the journal by the following esteemed members of the ISOPARB.

Dr S N Tripathy
Dr Shanti H K Singh
Dr Suchitra Pandit
Dr Hiralal Konar
Dr Usha Krishnan
Dr Milind Shah
Dr Meena Samant
Dr Archana Kumari