OUTCOME OF POST-PARTUM VAGINAL AND INTRACAESAREAN INSERTION OF IUCD

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ABSTRACT

IUCD is a common method of contraception followed in women. The effectiveness and side effects of IUCD is best frequently reported. Here, we have attempted to evaluate the outcome in post-partum vaginal insertion and intra-caesarean insertion of copper T.

METHODS

In this study 1098 patients for whom Cu-T inserted in OG Department, Govt. Thoothukudi Medical College, Thoothukudi, were enrolled. Among these patients, 806 underwent vaginal insertion and 292 intra-caesarean insertion. Both the groups were compared and analysed. Since there is a significant advantage of intra-caesarean insertion over vaginal insertion, all patients who are planned for LSCS should be motivated for intra-caesarean insertion of IUCD.

RESULTS

Both modes of PPIUCD insertion were found to have very low rate of expulsion, vaginal bleeding, infection, missing string and also effective on contraception. Adverse effects are more in vaginal. Hence, intra-caesarean from insertion of PPIUCD is beneficiary.

CONCLUSION

PPIUCD is an effective approach and may become the best choice as post-partum contraception in both vaginal as well as caesarean delivery.

KEYWORDS

PPIUCD, Vaginal Insertion, Immediate Post-partum, Intra-caesarean Insertion.

HOW TO CITE THIS ARTICLE: Raj HK, Vasu K. Outcome of post-partum vaginal and intra-caesarean insertion of IUCD. J. Evolution Med. Dent. Sci. 2016;5(63):4488-4490, DOI: 10.14260/jemds/2016/1022

INTRODUCTION

The increased institutional deliveries are the opportunity to provide women easy access to immediate PPIUCD. This immediate procedure is famous and common in countries like Mexico, China, Egypt and has impact in controlling the population and unmet pregnancy.^(1,2,3)

The use of an IUCD is simpler, less expensive, immediately reversible method of contraception. Insertion of IUCD after delivery may avoid the discomfort related to internal insertion; however, risk of spontaneous expulsion may be unacceptably high.⁽¹⁾ According to World Health Organisation (WHO) the post-partum period starts after delivery of the placenta and includes the first six weeks after delivery when the woman returns to her Non-Pregnant State.⁽⁴⁾ The extended post-partum period is considered up to one year after delivery.⁽⁵⁾ Post-partum family planning is the initiation and use of family planning methods during the first year after delivery.

Among women during their first year post-partum in India, 91% women want to avoid another pregnancy, but only 26% use family planning methods, 65% having an unmet need for family planning. Birth to pregnancy interval less than 24 months is associated with the highest risk of

poor maternal, perinatal, neonatal and infant health outcomes.^(6,7,8)

- Post placental - within 10 minutes after placenta delivery.
- Immediate post-partum (PPIUCD) – delivery to 48 hours.
- Post-partum – initial six weeks post-delivery.
- Extended post-partum – 6 weeks to one year after delivery.⁽⁹⁾

Patients who space 24–30 months have the healthiest infant and child outcomes. There is a common belief that PPIUCD is associated with higher expulsion rate rather than interval IUCD insertion. The objective of this study was to evaluate the efficacy and safety among the two modes of insertion, i.e. post-partum vaginal insertion and intra-caesarean insertion.^(10,11) Primary complications like failure rate, i.e. accidental pregnancy and secondary complications like expulsion, infection, abdomen pain, bleeding per vagina, white discharge, uterine perforation, psychological disturbances, removal, etc.^(10,12)

MATERIALS AND METHODS

All women admitted for delivery were counselled regarding PPIUCD and enrolled in the study conducted from April 2015 to Sep 2015 in the Department of Obstetrics and Gynaecology at Govt. Thoothukudi Medical College and Hospital, Thoothukudi, Tamilnadu. All eligible women fulfilling the inclusion criteria (post-partum mother of any age and parity within 48 hrs. of delivery) were included in the study.

Certain mothers were excluded from the study. They were >48 hrs. post-partum, h/o chorionic amnionitis, PROM >18 hrs., PIH, HIV not on ART, high risk for chlamydia and

Financial or Other, Competing Interest: None.

Submission 14-07-2016, Peer Review 27-07-2016,

Acceptance 29-07-2016, Published 08-08-2016.

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DOI: 10.14260/jemds/2016/1022

gonorrhoea, known PID, known pelvic TB, heart disease patients, clients who did not consent for PPIUCD.

The mothers were detailed about the benefits and side effects of IUCD and other available methods of contraception during that period. For all patients who were enrolled in study, an informed consent was taken. In post-partum vaginal insertion, CuT was placed high up in the fundus following vaginal delivery by long Kelley's forceps in lithotomy position, the excess string were cut and mothers were discharged on 48 hrs. after delivery.

Those undergoing caesarean section, IUCD were placed high up in the fundus manually holding the IUCD in between the index and the middle finger and passed through the uterine incision the string of CuT pointed to cervical canal. Care is taken not to include string during uterine closure.

All the recipients were examined before discharge and followed up in units scheduled for 6 weeks, 3 months and 6 months. At each unit the subjects were interviewed by staff and physical and pelvic examination were performed by the medical person to verify the presence of IUCD to check for signs of infection and excessive bleeding. Pelvic sonogram and X-ray pelvis were advised to confirm the position and presence of IUCD in patients with missing threads. They were counselled about the irregular bleeding pattern and low back pain for first six weeks. Subjects were advised to return at any time if they experienced pelvic pain/fever/excessive bleeding or unusual vaginal discharge. The primary outcome measure were tabulated as cumulative rate of pregnancy/expulsion/and other mechanically related complications. Followup was done in 6 weeks, 3 months and 6 months.

The information collected, compiled methodically and analysed according to statistician by Chi square test/Fischer exact test on SPS version 15 degrees.

RESULT AND ANALYSIS

In this study, the acceptance of PPIUCD in both the groups (vaginal and intra-caesarean) was best in the age group of 21-25 (50.6% and 47.2%) respectively, followed by 26.0% for vaginal insertion in the age group of (26-30 yrs.), whereas 36.3% in intra-caesarean group comes under the age group of less than 20 years.

Age Group (Yrs.)	Vaginal Insertion (n=806)	Intra-caesarean Section (n=292)
<20	139(17.2%)	106(36.3%)
21-25	408(50.6%)	138(47.2%)
26-30	210(26.0%)	38(13%)
31-35	39(4.8%)	6(2%)
>35	10(1.2%)	4(1.4%)

Table 1: Age Distribution

In both the groups, the acceptance of PPIUCD rate was low in the age group of more than 35 yrs. (1.2% and 1.4%).

Parity	Vaginal Insertion (n=806)	Intra-caesarean Section (n=292)
1	351(43%)	248(84.9%)
2	310(38.4%)	39(13.3%)
3	85(10.5%)	5(1.7%)
4	11(1.3%)	-0(0%)

Table 2: Parity Distribution Pattern in Vaginal and Intra-caesarean Group in IUCD Insertion

Primipara mothers accepted PPIUCD more in both the groups than others (43% and 84.9%).

Educational Status	Vaginal Insertion (n=806)	Intra-caesarean Section (n=292)
No formal Education	46(5.7%)	9(3%)
Primary Education	405(50.2%)	105(35.9%)
Secondary Education	202(25%)	120(41%)
Higher Education	85(10.5%)	58(19.8%)

Table 3: Educational Status Distribution Pattern in Vaginal and Intra-caesarean Group in IUCD Insertion

On analysing the educational status, women with primary education accepted vaginal PPIUCD more (56.2%) than the intra-caesarean group (35.9%). On the contrary, mother with secondary education in intra-caesarean group accepted PPIUCD (41%) than vaginal group (25%). In both the groups, the mothers with higher education with the acceptance rate being (10.5% and 19.8%). Mothers with no education, the acceptance was poor in both the groups (5.7% and 3%).

Residence	Vaginal Insertion	Intra-caesarean Group
Rural	278 (34.5%)	118 (40.4%)
Urban	510 (63.2%)	168 (57.5%)
Nomadic	16 (1.9%)	4 (2.92%)

Table 4: Demographic Distribution of Both the Groups

Urban women were more motivated than rural women in both the groups (63.2% and 57.2%) when compared to rural mothers in both the groups (34.5% and 40.4%). In both the groups, we had nomadic mothers with acceptance rate of (1.9% and 2.9%) in vaginal and intra-caesarean groups respectively.

Side Effects	Vaginal	Intra-caesarean
Expulsion	24 (2.9%)	3 (1%)
Bleeding	43 (5.3%)	14 (4.8%)
Lower Abd Pain	86 (10.6%)	22 (7.5%)
Pregnancy	12 (1.4%)	3 (1%)
White Discharge	48 (5.9%)	14 (4.8%)
Psychological Disturbance	16 (1.9%)	5 (1.7%)
Dyspareunia	6 (0.74%)	0 (0%)
Dysuria	14 (1.5%)	0 (0%)
Perforation	0 (0%)	0 (0%)
Missing Strings	38 (4.7%)	62 (21%)
Low Back Ache	112 (13.8%)	48 (16.4%)
Spotting PV	12 (1.4%)	4 (1.4%)

Table 5: Side Effects of PPIUCD and Comparison of Vaginal and Intra-caesarean Group

Vaginal group had more expulsion rate when compared to intra-caesarean group (2.9% and 1%). Both the groups had excessive bleeding 5.3% and 14.8%), which shows that it is a common problem regardless of mode of insertion. Pregnancy was reported in both the groups at the rate of 1.4% in vaginal and 1% in the intra-caesarean group. In both the groups, mothers had poor sexual drive and psychological disturbance

in the terms of low mood swing and irritation at the rate of 1.9% and 1.7% in vaginal and intra-caesarean group. There was no case of perforation in both the groups. Missing strings were documented more in the intra-caesarean group (21%) than vaginal group (4.7%). In successive follow-ups those with missing strings were subjected for pelvic examination, if needed for USG pelvis for confirmation of presence of IUCD inside the uterus. White discharge was noted in both the groups at the rate of 5.9% and 14.8%, which was treated. Low backache was more in intra-caesarean group (16.4%) than vaginal group (13.8%), which was treated with rest and NSAIDs.

DISCUSSION

As a contraceptive method used during post-partum period, the IUD has a distinct advantage. It is free from systemic side effects and does not affect breast feeding like hormonal methods. It is a reversible method. In addition, IUCD does not require regular user compliance.

The acceptance of PPIUCD was indirectly proportional to the degree of parity similar to most of the studies.^(11,12) This may be due to that higher parity subjects opt for permanent methods on contrary to lower parity seeking for spacing methods.

The mode of insertion is important, as it influences the risk of expulsion. In our study, the cumulative expulsion rate after 6 months in vaginal and intra-caesarean insertion was almost the same 2.9% and 3% respectively in contrast to other studies.^(5,6) This is because the expulsion rate is more in post-placental insertion than in the post-partum period or interval insertion.

Menorrhagia and spotting were encountered in the same frequency, about 5.3% in vaginal and 4.8% in intra-caesarean method. This was in concurrence with other studies by Welkovic S et al.⁽⁶⁾

Lower abdominal pain was higher in vaginal (10.6%) than in intra-caesarean (7.5%) group in concordance with Celen S et al.⁽¹⁾ The prevalence of white discharge was slightly higher (5.9% vs 4.8%) in the vaginal group. Dysuria was present in 1.5% of patients in the intra-vaginal group. These findings could be due to ascending infection from the lower genital tract.

Low back pain was less common in the intra-vaginal segment (13.8% vs 16.4%), which may be because of undue bed rest in the postoperative period. Perforation was not encountered in both the groups. Dyspareunia and other psychological disturbances were slightly more in vaginal group.

Similar to the study by Bhutta et al,⁽⁷⁾ missing strings was a frequent anxious complaint and observation in the intra-caesarean group where the IUCD is placed abnormally high in the fundus, shorter strings in CuT 380A when compared to multiloop, curling, retraction of the thread into the cervical canal and uterine cavity or detachment of the thread.

In our study, failure of IUCD in the form of pregnancy with CuT in situ does not show any preponderance to the mode of IUCD insertion, rather it follows the usual failure rate.

CONCLUSION

Immediate post-partum insertion of IUCDs appeared safe and effective. Advantages of immediate post-partum insertion include high motivation, assurance that the woman is not pregnant and convenience. However, expulsion rates appear to be higher than with interval insertion. The expulsion rates are almost the same in intra-vaginal and intra-caesarean mode of insertion. But the intra-caesarean insertion enjoys less adverse effects like discomfort of insertion, genital tract infections, menorrhagia, spotting, etc. Hence, it is an ideal mode of PPIUCD for spacing pregnancies and improving maternal and child health. All primigravida mothers planned for caesarean delivery should be motivated for intra-caesarean IUCD insertion.

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