COMPARISON OF CONTINUATION OF POST-PLACENTAL INSERTION OF COPPER T AFTER CESAREAN SECTION AND NORMAL VAGINAL DELIVERY

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ABSTRACT

Objective: The objective of this study was to assess the efficacy of post-placental copper T insertion following vaginal and cesarean delivery.

Methods: This is a prospective study conducted for the period of 1 year on pregnant females undergoing deliveries at Department of Obstetrics and Gynaecology, Sardar Patel Medical College and AGH, Bikaner. The total number of postpartum intrauterine contraceptive device inserted participants included in the study were 200, divided into two groups vaginal (group A) and lower segment cesarean section (LSCS) (group B) groups.

Results: Mean age of the patients was 26.15±4.02 years. Most of the acceptors in both the groups were para-2 with 30% in vaginal group and 76% in LSCS group. The complaints at 6 weeks follow-up, in both groups, were similar, but the rate of removal was higher in vaginal group (9%) compared to LSCS group (2%). At 3 months follow-up, in vaginal group, the most common complaint was bleeding per vagina (PV) in 7.31% cases whereas missing thread 31.25% in LSCS group. Over a period of 3 months, the main reason for intrauterine contraceptive devices (IUCD) removal was bleeding PV in both group (six cases in vaginal group and three cases in LSCS group).

Conclusion: Immediate post-partum insertion of IUCD appears to be safe and effective method of contraception.

Keywords: PPIUCD, LSCS, Vaginal delivery.

INTRODUCTION

India’s maternal mortality ratio stays at an alarming figure of 113/100,000 live births. Post-partum complications and complications related to multiple pregnancies are the major cause of maternal mortality [1]. National Population Policy 2000 aims to attain a stable population, gender, and demographic balance by 2045 by providing affordable and quality health care. Providing quality contraception services to women is one of the cornerstone for MDG goals of improved population, gender, and demo

Women in third trimester attending the antenatal clinic or admitted in labor room were counseled for PPIUCD. Exclusion criteria were ruled out. These included hemoglobin <8 g/dL, congenital uterine anomaly, coagulation disorders, TB, diabetes mellitus, heart diseases, post-partum hemorrhage, prolonged rupture of membrane >18 h, history of any ectopic pregnancy, distorted uterine cavity, patients consenting for sterilization, and chorioamnionitis. Informed consent was taken from the eligible cases.

Detailed history was taken including age, residence, religion, socioeconomic status, literacy, obstetric history, and number of prior children. Clinical examination and baseline investigations were done. Cu-T 380A was placed in the uterus after delivery of the placenta. Asepsis was ensured and proper technique used as per vaginal or cesarean mode of delivery.

Cases were kept in follow-up for immediate, 6 weeks and 12 weeks post-delivery or at any time in case excessive bleeding per vagina (PV), pelvic pain, foul smelling discharge, and with protrusion of CuT thread. At every visit, detailed clinical history was taken. Data collected were submitted for statistical analysis.

RESULTS

Table 1 shows demographic distribution of the study population. Acceptance of PPIUCD, in this study was best in the age group of 21–30 (81% in post-placental and 94% in intra-cesarean) followed by 31–40 years (12% and 13%, respectively). The mean age of acceptors in Group A was 26.28±4.367 years and in Group B that it was 26.02±3.67 years. In our study, majority of acceptors were educated till primary school with 74% in Group A and 73% in Group B. Least acceptors
were illiterate with 16% in group A and 9% in group B. Majority of cases were belonged to lower middle class (41% cases in vaginal group and 44% cases in lower segment cesarean section [LSCS] group). Most of acceptors that are 64 females in vaginal group and 58 females in LSCS group came from rural area and the rest belonged to urban area. Most of acceptors in both groups were Hindus with 86 in group A and 89 in group B. Rest of the acceptors were Muslims in both groups. Majority of acceptors are multipara with 90% in group A were para-2 or more and 96% in group B were para-2 or more. Only 10% females in vaginal group and 4% in LSCS group were primipara status (Fig. 1).

Table 2 on 6 weeks follow-up, 55 patients in vaginal group and 42 patients in LSCS group did not have any complaint. Main complaint in vaginal group, was bleeding PV and pain abdomen with 13% cases each. However, in LSCS group, most common complaint was missing thread with 38% cases followed by bleeding PV in 9% cases. The complaints in both groups were similar and the difference was not statistically significant (p=0.259). Only the percentage of patients who complained about missing thread were statistically significantly higher in LSCS group (p=0.042).

In Table 3 on 3 months follow-up, 62 patients in vaginal group and 53 patients in LSCS group did not have any complaint. Main complaint in vaginal group, was missing thread and bleeding PV in 6 (7.31%) cases followed by pain abdomen and missing thread with 5 (6%) cases each. In LSCS group, most common complaint was missing thread with 30 (31.25%) cases followed by bleeding PV in 7 (7.29%) cases. The complaints in both groups were statistically similar and the difference was not statistically significant (p=0.086). Only the percentage of patients who complained about missing thread were significantly higher in LSCS group (p=0.001).

Table 1: Sociodemographic and obstetrics characteristics of the study population

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Vaginal (group A) (n=100)</th>
<th>LSCS (group B) (n=100)</th>
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<tr>
<td></td>
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<tr>
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<td>Upper class</td>
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</tr>
</tbody>
</table>

LSCS: Lower-segment cesarean section

Table 1: Sociodemographic and obstetrics characteristics of the study population

In Table 2, on 6 weeks follow-up, significantly more patients in vaginal group had IUCD in situ (13 cases) compared to LSCS group (9 cases). In LSCS group, in 98% cases, IUCD was found in uterine cavity compared to 4.87% in vaginal group. Missing threads were detected in intra cesarean group (16.29%) as compared to 10% in vaginal group, at 3 months follow-up, 62 patients in vaginal group and 55.21% cases of IUCD not seen.

In Table 4, per speculum examination at 6 weeks, significantly more patients in vaginal group had IUCD in situ (100%) compared to 75.60% in LSCS group. In LSCS group, the main reason for IUCD removal is bleeding PV (97.56%) and pain abdomen (97.91%) cases.

In Table 5, USG was done for confirmation of location of IUCD in vaginal group. IUCD in situ was seen in 91% of cases and IUCD was not seen in 9% cases. In LSCS group, in 98% cases, IUCD was found in uterine cavity and only in 2% cases IUCD was not seen in uterine cavity. At 3 months follow-up in vaginal group, out of 82 cases, IUCD in situ presents in 80 (97.56%) cases while IUCD was not seen in 2 (2.43%) cases. In LSCS group, IUCD presents in 94 (97.91%) cases while IUCD was not seen in 2 (2.08%) cases.

In Table 6, at 6 months follow-up, the rate of removal and expulsion each was higher in vaginal group (9%) as compared to LSCS group (2%). At 3 months, the rate of removal in vaginal group is 85.3% (seven cases) as compared to LSCS group, that is, 5.2% (five cases). Expulsion rate was same in both the groups.

In Fig. 2, over a period of total 3 months, the main reasons for IUCD removal in vaginal group were bleeding PV (6%) and pain (4%). In LSCS group, the main reason for IUCD removal is bleeding PV (3%) and opting to sterilization (2%).
DISCUSSION

The need for contraception is highly warranted in our country since approximately 27% of births in India occur in less than 24 months after a previous birth. Another 34% of births occur between 24 and 35 months. Hence, the term birth-to-pregnancy interval is important which is the time period between a live birth and the start of the next pregnancy [1,10,11]. In our study, we compared immediate post-placental vaginal delivery IUCD insertion (group A) and post-placental insertion after LSCS (group B). Both groups had 100 cases in each group. The cases were followed up at 6 weeks and 3 months with set of parameters.

The mean age of acceptors in vaginal group was 26.28±4.367 years and in LSCS group it was 26.02±3.67 years. Kanwat et al. reported that mean age of acceptors was comparable in the both groups, being 24.42±3.79 years in vaginal and 24.20±3.42 years in cesarean group [8].

The cases were followed up to 3 months post-delivery. On 6 weeks follow-up, in vaginal group, the most common complaint was bleeding PV and pain abdomen with 13% cases each. However, in LSCS group, most common complaint was missing thread with 38% cases followed by bleeding PV in 9% cases. Chawla et al. reported pain abdomen in vaginal group 16% and in LSCS group 23% was most common complaint in both the groups [12]. Tripathi and Sahu reported bleeding PV (23% in vaginal group and 11% in LSCS group) as most common complaint at 6 weeks of follow-up in both the groups [9].

On 3 months follow-up, in vaginal group, the most common complaint was bleeding PV in 6 (7.31%) cases followed by pain abdomen and missing thread with 5 (6%) cases each. In LSCS group, most common complaint was missing thread with 30 (31.25%) cases followed by bleeding PV in 7 (7.29%) cases (p=0.806). Only the percentage of patients who complaint about missing thread were significantly higher in LSCS group (p=0.001). This is due to the curling of strings within the uterine cavity in incesarean technique. The most common complaint as reported by Chawla et al., out of 155, one subject (0.3%) had pain abdomen, excess bleeding PV was found in one (0.3%) [12]. Tripathi and Sahu [9] and Soni et al.[13] also reported excessive bleeding PV as main cause in both groups.

Per speculum examination at 6 weeks follow-up, significantly high numbers of missing threads were detected in intra cesarean group (35%) as compared to 10% in vaginal group. Our study is comparable with the study conducted by Hakler et al. where missing tails was found in 30% cases of cesarean group and 16% cases of vaginal group [14]. USG was done for confirmation of location of IUCD at 6 weeks. In vaginal group and LSCS group, IUCD was not seen in uterine cavity in 9% cases and 2% cases, respectively, due to unnoticed spontaneous expulsion, similarly reported by Kanwat et al.

At 6 weeks follow-up, the rate of removal and expulsion each was higher in vaginal group (9%) as compared to LSCS group (2%). Similar to present study, Halder et al. found that total removal was 8% in vaginal group and 4% in intra-cesarean group. Expulsion rate was 4% in the vaginal group and 2 % in intra-cesarean group [14]. Lall and Nagar and Hooda et al. also found similar results [4,15].

In our study, overall continuation rate was 73% in vaginal group and 89% in LSCS group at the end of 3 months, similar to study done by Soni et al., Kanwat et al., and Lall et al.

Over a period of total 3 months, the main reasons for IUCD removal in vaginal and LSCS group were bleeding PV 6% and 3%, respectively. Similarly, Soni et al. and Tripathi and Sahu reported in the vaginal group, excessive bleeding per vagina was the most common cause for removal.

CONCLUSION

Immediate post-partum insertion of IUCD appears to be safe and effective method of contraception. The effectiveness of post-placental IUCD insertion after normal vaginal delivery and after LSCS is comparable and there is no major side effect after either of the procedure. The expulsion rate was slightly higher in vaginal group but the difference was not statistically significant. The feasibility of accepting PPIUCD insertion can increase with antenatal counseling and institutional deliveries. It can contribute significantly to increase the use of IUCD as a long-acting reversible contraception in Indian population.

ACKNOWLEDGMENT

We owe a debt of gratitude to the Sardar Patel Medical College, Bikaner for assistance during the course of the research.

AUTHORS' CONTRIBUTION

All the authors have contributed equally.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

AUTHOR'S FUNDING

The authors, hereby, state that they did not get any financial assistance for their research, writing, or publication of this paper.

REFERENCES