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Assessment of efficacy of post placental and intra-cesarean insertion of intrauterine contraceptive devices

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Abstract

Background: Insertion of an intrauterine contraceptive device (IUD) immediately after delivery has been recommended by the WHO, as one of the safe and effective methods of temporary contraception. Hence; the present study was conducted for assessing the efficacy of post placental and intra-cesarean insertion of intrauterine contraceptive devices.

Materials & methods: A total of 500 women were enrolled in the present study that delivered at community health centre, Lopoje, Amritsar and were counseled for PPIUCD. Post-placental insertion was done and CuT 375 A was used. All the procedures were commenced under the hands of skilled and experienced gynecologists. Regular follow-up was done. Presence of any complication was recorded. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software.

Results: Mean age of the subjects was found to be 17.9 years. Desire of pregnancy within one to two years was found to be present in 7.2 percent of the patients. Reasons of acceptance were "No remembrance once inserted" in 32.8 percent of the cases, while it was due to safety reasons in 15.2 percent of the cases. Expulsion occurred within a week in 0.8 percent of the cases, while it occurred within one week to one month in 5.4 percent of the cases.

Conclusion: Post placental and intra-cesarean insertion of intrauterine contraceptive devices (PPIUCD) has a high rate of acceptance and is associated with lower incidence of complications. Even though it has higher safety index, still awareness of PPIUCD is very low among general female population.

Keywords: cesarean, contraceptive device, intrauterine

Introduction

61 % of births in India occur at intervals that are shorter than the recommended birth to birth interval of 36 months (27 % of births occur within 24 months after a previous birth, and 34 % of births occur between 24 and 35 months). Only 26 % of women are using any method of family planning during the first year post-partum. Hence, the issue of spacing may be addressed during post-partum period by intrauterine contraceptive device^[1-3].

Insertion of an intrauterine contraceptive device (IUD) immediately after delivery has been recommended by the WHO, as one of the safe and effective methods of temporary contraception. In the immediate post delivery period the women are highly motivated and need an effective method for contraception so that the child can be brought up with a relaxed mind without the worry of unintended pregnancy. On the other hand, if they are made to wait for 6 wk for initiating an effective contraception, they may conceive accidentally or may not come for contraception^[3, 4]. Hence; the present study was conducted for assessing the efficacy of post placental and intra-cesarean insertion of intrauterine contraceptive devices.

Materials & methods

The present study was conducted in community health centre, Lopoje, Amritsar with the aim of assessing the efficacy of post placental and intra-cesarean insertion of intrauterine contraceptive devices. Written consent was obtained from all the patients after explaining in detail the entire research protocol. Study period for the present study was from Feb 2019 to Dec 2019. A total of 600 women were enrolled in the present study that delivered at community health centre, Lopoje, Amritsar and were counseled for PPIUCD. Post-placental insertion was done and CuT 375 A was used. All the procedures were commenced under the hands of skilled and experienced gynecologists. Regular follow-up was done. Presence of any complication was recorded. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS

software.

Results

In the present study, a total of 500 women were enrolled. Mean age of the subjects was found to be 17.9 years. 64.6 percent of the patients belonged to the age group of 20 to 28 years. 82.8 percent of the patients were housewives while the remaining was employed. Parity was one to two in 89.6 percent of the patients, while it was three to four in 5 percent of the patients. Desire of pregnancy within one to two years was found to be present in

7.2 percent of the patients. However; 13 percent of the patient population were not sure of future pregnancy. Reasons of acceptance were “No remembrance once inserted” in 32.8 percent of the cases, while it was due to safety reasons in 15.2 percent of the cases. 21 percent of the patients accepted it because of doctor’s advice. Bleeding was found to be present in 13.4 percent of the cases, while expulsion was seen in 7.2 percent of the cases. In the present study, expulsion occurred within a week in 0.8 percent of the cases, while it occurred within one week to one month in 5.4 percent of the cases.

Table 1: Demographic data

Parameter	Number of patients	Percentage of patients
Age group (years)	Less than equal to 19	4.4
	20 to 28	64.6
	29 to 39	29.8
	More than 40	1.2
Occupation	Housewife	82.8
	Employed	17.2
Parity	One to two	89.6
	Three to four	5
	More than four	5.4
Future pregnancy desire	One to two years	7.2
	More than equal to three years	70.4
	Not sure	13
	No more	9.4

Table 2: Reasons of acceptance among parturient

Reasons of acceptance	Number of patients	Percentage of patients
Long term	28	5.6
Safety	76	15.2
Non-hormonal	14	2.8
Reversible	101	20.2
No remembrance once inserted	164	32.8
Doctor’s advice	105	21
Non-interference with breast-feeding	12	2.4

Table 3: Complications

Complications	Number of patients	Percentage of patients
Bleeding	67	13.4
Expulsion	36	7.2
Strings not visible	22	4.4

Table 4: Timing and rate of expulsion

Timing	Number of patients	Percentage of patients
Within a week	4	0.8
One week to one month	27	5.4
More than one month	5	1
Total	36	7.2

Discussion

The ideal time for postpartum contraception either as a precautionary measure or as a family planning tool is immediately post-delivery. Immediate contraception is convenient and timely because a woman is actively evaluating her current and future family planning options. A woman’s return to fertility post-delivery is not always predictable because it can occur as soon as 3 weeks in non-lactating women and may not necessarily be accompanied by menses. The pregnancy environment represents the near-ideal timing for discussions with patients in need of contraception, the nature of the products available, and their individual benefit and risks. The patient’s receptiveness and willingness to select a given form of contraception is a critical component in allowing a woman to

adequately manage her contraception needs [5-8]. Hence; the present study was conducted for assessing the efficacy of post placental and intra-caesarean insertion of intrauterine contraceptive devices.

In the present study, a total of 500 women were enrolled. Mean age of the subjects was found to be 17.9 years. 64.6 percent of the patients belonged to the age group of 20 to 28 years. 82.8 percent of the patients were housewives while the remaining was employed. Parity was one to two in 89.6 percent of the patients, while it was three to four in 5 percent of the patients. Desire of pregnancy within one to two years was found to be present in 7.2 percent of the patients. However; 13 percent of the patient population were not sure of future pregnancy. Reasons of acceptance were “No remembrance once inserted” in 32.8 percent of the cases, while it was due to safety reasons in 15.2 percent of the cases. 21 percent of the patients accepted it because of doctor’s advice. In a systematic review by Kapp and Curtis, the outcomes of post-partum insertion of IUD at different time interval were compared. The evidence demonstrated no increase in risk of complications among women who had an IUD inserted during the post-partum period; however, some increase in expulsion rates occurred with delayed post-partum insertion when compared to immediate insertion. Expulsion rates were more when compared to interval insertion. Post-placental insertions during caesarean section were associated with lower expulsion rates than post-placental vaginal insertions without any increase in other complications [9].

In the present study, Bleeding was found to be present in 13.4 percent of the cases, while expulsion was seen in 7.2 percent of the cases. Hooda R *et al.* studied the clinical outcomes of IPPIUCD insertions and compare them as a factor of route of insertion (vaginal versus caesarean). A Cohort of 593 vaginal and caesarean deliveries with IPPIUCD insertions, over a two-year period, was studied and compared for follow-up results. Outcome measures were safety (perforation, irregular bleeding, unusual vaginal discharge, and infection), efficacy (pregnancy, expulsions, and discontinuations), and incidence of undescended IUCD strings. Overall complication rates were low. No case of perforation or pregnancy was reported. Spontaneous expulsions were present in 5.3% cases and were significantly higher in vaginal insertions ($p = 0.042$). The incidence of undescended strings was high (38%), with highly significant difference between both groups ($p = 0.000$). IPPIUCD is a strong weapon in the family planning armoury and should be encouraged in both vaginal and caesarean deliveries. Early follow-up should be encouraged to detect expulsions and tackle common problems [10].

In the present study, in the present study, expulsion occurred within a week in 0.8 percent of the cases, while it occurred within one week to one month in 5.4 percent of the cases. Levi EE *et al.* compared intrauterine device (IUD) use at 6 months postpartum among women who underwent intracesarean delivery (during cesarean delivery) IUD placement versus women who planned for interval IUD placement 6 or more weeks postpartum. The primary outcome was IUD use at 6 months postpartum. A sample size of 112 (56 in each group) was planned to detect a 15% difference in IUD use at 6 months postpartum between groups. 172 women were screened and 112 women were randomized into the trial. Baseline characteristics were similar between groups. Data regarding IUD use at 6 months postpartum was available for 98 women, 48 and 50 women in the intracesarean and interval groups, respectively. A larger proportion of the women in the intracesarean group were using an IUD at 6 months postpartum ((40/48), 83%) compared to those in the interval group. Among the 56 women randomized to interval IUD insertion, 22 (39%) of them never received an IUD; 14 (25%) never returned for IUD placement, five (9%) women declined an IUD, and three (5%) had a failed IUD placement. IUD placement at the time of cesarean delivery leads to a higher proportion of IUD use at 6 months postpartum when compared to interval IUD placement [11].

Conclusion

From the above results, the authors concluded that PPIUCD has a high rate of acceptance and is associated with lower incidence of complications. Even though it has higher safety index, still awareness of PPIUCD is very low among general female population. Hence; further studies are recommended.

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