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Original Research Article

Awareness of post partum intra uterine contraceptive device and reasons for its low acceptance in an urban Indian population

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ABSTRACT

Background: The safety and efficacy of the Post-Partum Intra Uterine Contraceptive Device (PPIUCD) has been documented worldwide. With increasing institutional deliveries and greater sensitization, the aim is to increase PPIUCD insertions. Many areas still report poor acceptance. Objectives of this study to determine the proportion of antenatal women willing to accept PPIUCD insertion and the reasons behind refusal to accept this method.
Methods: A prospective questionnaire study was done between January 2019 to June 2019 of 200 women. Inclusion criteria were antenatal women in the 2nd/3rd trimester. Exclusion criteria were those opting for a permanent method of contraception and those with a contra-indication.
Results: Eighty-four women (42%) had never used any method of contraception. Earlier Intrauterine device (IUD) use (including both interval and PPIUCD) was in only 18.9% of all contraceptive users. Only 2 women in the group had ever used PPIUCD. 79% of women were aware of IUDs. Those unaware were mainly nulliparous. Amongst those aware of an IUD, 88 (56%) were aware it could be inserted postpartum. Only 18% were aware it could be inserted intra-cesarean. All women who participated were offered the option for a PPIUCD. Fifty-nine (29.5%) of all women expressed their willingness but on follow up till delivery only 18 of these women got a PPIUCD inserted. Amongst those not willing for the PPIUCD insertion the commonest reason was general apprehension (39%) followed by partner refusal (33%) and fear of complications (31%). Six women (4.2%) gave history of complications following earlier use and were unwilling for its repeat use.
Conclusion: The large unmet need for contraception in India can be solved through repeated counselling and discussions with the woman during her antenatal visits. Alleviating apprehension and addressing concerns of the couple will increase PPIUCD acceptance.

Key Words: Awareness, Post-partum Intra uterine device, Post-partum contraception, Reasons for non-acceptance

INTRODUCTION

Intra uterine contraceptive device (IUCD) has been in use for the last many decades to prevent pregnancy. With newer innovations in design and with better understanding of its use through years of evidence, the modern copper containing IUCD is a highly effective, safe, long-acting, coitus independent and rapidly reversible method of contraception with a few side effects.[1] Timing of insertion is usually six weeks after delivery though recent studies have shown that insertion of IUCD immediately after delivery is a safe and effective procedure.[2] Insertion of an IUCD after delivery is beneficial as women are more strongly motivated to do so at this time. Post-partum insertion also has the advantage of being convenient for both patients and health-care providers.[3] The Postpartum Intra Uterine contraceptive Device (PPIUCD) also has the advantage

of no adverse effects on breast feeding unlike several other methods and has better efficacy than natural methods like lactational amenorrhoea method.[2]

The current national strategy in India is for increasing IUCD usage. The available target to cover with PPIUCD as a method of contraception, has expanded in the recent past due to increasing institutional deliveries and greater sensitization and counselling.[4] Although several studies have shown an increasing trend in acceptance of PPIUCD,[5] the National Family Health Survey 2015-16 (NFHS-4) for various states, however, shows a low percentage of women using IUCD/PPIUCD as a current method of contraception.[5] NFHS- 4 data for Haryana (the state in which authors have conducted our study) shows this rate as 6.2% in urban areas.[5] The acceptance of PPIUCD at our hospital also is low (5% - prior to this study). Authors thus decided to study the awareness amongst women presenting to the antenatal clinic regarding PPIUCD and review the reasons for low acceptability. Understanding the barriers to the acceptance of the PPIUCD will enable us to ensure appropriate counselling and improve acceptance.

The aims and objectives of the study were to determine the proportion of antenatal women willing to accept PPIUCD insertion and to determine the reasons behind refusal to accept this method of contraception.

METHODS

The study was a prospective questionnaire study carried out in the antenatal outpatient department (OPD) in the Department of Obstetrics & Gynecology, ESIC Medical College and Hospital, Faridabad. Our centre caters mostly to an urban population of lower socioeconomic strata. A total of 200 women participated in the study which was carried out between January 2019 to June 2019.

Inclusion criteria

Antenatal women in the 2nd or 3rd trimester attending the OPD. Women excluded from the study were those who had planned to opt for a permanent method of contraception post-delivery and women who had a contra indication to IUCD (e.g. uterine anomaly, fibroid uterus etc).

Exclusion criteria

Those opting for a permanent method of contraception and those with a contra-indication.

The sample size was calculated based on the average attendance of patients to the OPD. On the basis of this information, sample size with α (TYPE 1 error) of 0.05 (which is also known as significance level), power (1 – β, where β is type II error), and confidence interval of 95% was calculated using the formula:

$$\eta = (Z\alpha)^2 * P * (1-P)/ E^2$$

Where;

- $Z\alpha = 1.96$ (critical value that divides the central 95% of Z distribution from 5% in the tails)
- P = proportion of women attending Antenatal OPD in 6 months
- E = margin of error (5% or 0.05)

After obtaining informed consent, data was collected from participants using a pre-structured questionnaire given to each patient. The questionnaire included information regarding

- Age, parity and education
- History of prior medical termination of pregnancy due to failure of contraception
- Contraceptive method/methods (if any) which the couple had used in the past
- Whether or not the couple were aware of an IUCD and knowledge of whether it could be inserted immediately after a delivery including during a caesarean delivery.
- Whether the couple was willing for an IUCD to be inserted at the time of delivery.
- For women unwilling for an IUCD insertion, the reasons for the reluctance were enquired.

Routine antenatal care was provided to all women irrespective of their willingness to participate in the study and irrespective of their preferences.

Statistical analysis was carried out with Microsoft Excel 2016

RESULTS

A total of 204 women were given the questionnaire after fulfilling the inclusion criteria and consenting to the study. Four women later changed their mind and informed us they were willing for a permanent method of contraception post-delivery and hence were excluded from the study. The mean age of the women was 25.57±3.97.

There were 78 women (39%) who were nulliparous. Multigravid women (61%) formed the majority of the population included (Table 1). A total of 77 women (38.5%) had a history of undergoing a medical termination of pregnancy (MTP) for failure of contraception and out of these 22 women had a history of 2 MTPs (Table 2).

Eighty-four women (42%) had never used any method of contraception. Amongst the couples who had used some form of contraception in the past, the majority (43.9%) were of male barrier contraception (condom). Natural methods were used by 19.8 % of all contraceptive users

and IUCD (including both interval and PPIUCD) were used by only 18.9% of all contraceptive users. Only 2 women in the entire group had ever used PPIUCD.

Eight women (6.8%) amongst all contraceptive users had used hormonal contraception and 12 women had a history of using multiple types of contraception (Table 3).

Table 1: Parity of study population.

Parity	No of women
No children	78 (39)
1 child	71 (35)
2 children	41 (21)
3 children	8 (4)
4 children	2 (2)
Total	200

Table 2: Women with history of earlier MTP due to failure of contraception.

	No of women (%)
History of 1 MTP	55 (71)
History of 2 MTP	22 (29)
Total	77

Table 3: Women with a history of contraceptive use in the past.

	No of women (%)
Never used	
Primi	40 (20)
Multi	44 (22)
Natural methods	23 (11.5)
Male barrier	51 (25.5)
Interval IUCD	18 (9)
PPIUCD	4 (2)
OCP	6 (3)
Injectable hormonal	2 (1)
Used multiple types of contraception	
Natural methods and barrier	10 (5)
Barrier and IUCD	2 (1)
Total	**200**

Awareness of the IUCD as a method of contraception was one of the factors studied in the group. 79% of women (158) were aware of IUCD. Most of the women who were unaware of the IUCD were nulliparous. (35% of all nulliparous women were unaware of the IUCD as against only 11.4 % of multigravid women).

Amongst those aware of an IUCD as a method of contraception, 88 (56%) were aware it could be inserted immediately following a vaginal delivery. Only 18 % were aware it could be inserted during a caesarean delivery (Table 4 and 5).

Table 4: Awareness about IUCD in the study population.

	No of women (%)
Aware of IUCD	
Primi	50
Multi	108
Total (Aware of IUCD)	158 (79)
Unaware of IUCD	
Primi	28
Multi	14
Total (Unaware of IUCD)	42 (21)

Table 5: Awareness about PPIUCD intra-caesarean.

	No of women (%)
Aware that IUCD can be inserted immediately following a vaginal delivery	88 (56)
Aware that it can be inserted at the time of caesarean	29 (18)

All the women who participated in the study were offered at the time of filling of the questionnaire the option for opting for an IUCD insertion post-delivery. Those who had never heard of the IUCD were counselled about it use, its benefits and side effects and were also offered the IUCD postpartum/ intra-caesarean. Fifty-nine (29.5%) women expressed their willingness for a PPIUCD. These patients were followed up till their delivery and out of the 59 patients, 54 delivered at our setup and the remaining 6 delivered at other centres and were telephonically contacted. Only 18 of the women who initially expressed willingness for the PPIUCD got a PPIUCD inserted and this accounted for 9% of total women included in the study (Table 6).

Amongst those not willing for the PPIUCD insertion at the time of initial filling of the questionnaire, authors tried to look into the causes for their unwillingness and refusal. The primary reason for refusal was general apprehension (39%). The next common reasons were family (mainly partner) refusal (33%) and fear of complications (31%). Fifteen women preferred to use other contraceptives. Six women (4.2%) gave a history of using the IUCD earlier and still not wanting to use it as they had a history of complications or were unsatisfied with earlier use. Out of these 6 women, 2 had a misplaced IUCD warranting hysteroscopic removal, 1 woman had failure of contraception and 3 women complained of menorrhagia with earlier use and hence did not want to use the IUCD again. Two women refused the PPIUCD on religious grounds. Two women refused on the grounds that they had heard using it would lead to blurring of vision (myths). Nine women did not give any reason for their refusal and 4 women cited multiple reason for their refusal (Table 7).

Table 6: Willingness for PPIUCD at the time of the study.

	No of women (%)
No of women willing at the time of filling the questionnaire	59 (29.5% of total women)
No of women who actually got the PPIUCD inserted at delivery	18 (30.5% of women who were willing at time of filling the questionnaire) and 9% of total women

Table 7: Primary reason for unwillingness for PPIUCD at the time of the study.

	No of women (%)
Fear of complication	
Misplaced IUCD	9 (6.3)
Expulsion	2 (1.4)
Excessive bleeding during	4 (2.8)
Menstruation	0 (0)
Genital infection	16 (11.3)
Multiple complications (any combination of the above)	31 (21.9)
Total (fear of complications)	
Family refusal	
Husband	19 (13.4)
Mother in law	13 (9.2)
Mother	1 (0.7)
Total (family refusal)	33 (23.4)
Wanting to use other contraceptives	
Natural methods/ LAM	3(2.1)
Interval IUCD	2 (1.4)
Male barrier	5 (3.5)
OCP/ other hormonal	5 (3.5)
Total (wanting to use other contraceptives)	15 (10.6)
h/o missing IUCD with earlier use of IUCD/PPIUCD	2 (1.4)
h/o failure with IUCD	1 (1.4)
h/o menorrhagia with earlier use of IUCD	3 (2.1)
Religious	2 (1.4)
Myths associated with IUCD	2 (1.4)
General apprehension	39 (27.6)
Not willing without any reason	9 (6.3)
Multiple reasons (Any combination of the above)	4 (2.8)
Total	**141**

DISCUSSION

The Intra uterine Device (IUD) has been around for more than half a century. Over the decade's authors have seen the transformation of the IUD from the humble Lippe's loop to the more technologically advanced progesterone releasing IUDs. The copper containing IUDS were introduced in the 80s in India and they too have undergone various transformations both in their design and more recently timing i.e. its insertion postpartum. However, despite its several advantages including a very low failure rate, this long term reversible contraceptive which has been encouraged tremendously by the Government of India and gynaecologists all over the country, the IUCD is sadly not a favoured contraceptive choice and has gone into disrepute.

The PPIUCD insertion rate at our hospital before the onset of this study was 5% and this has risen to 9% at the end of our study simply by making patients aware and conscious of their choices through the filling of the questionnaire.

Several studies have explored reasons for low acceptance of the PPIUCD.[6-8] Several of these are common irrespective of the demographical differences. One of the most common reasons authors found for non-acceptance of PPIUCD was general apprehension which accounted for a whopping 29% (almost one third) of reasons for refusal. Women were simply scared to use it, and this is the group which, with appropriate counselling and increased awareness could be prompted and encouraged to use this method. Another third of women refusing the PPIUCD was due to fear of complications which again can be mitigated by good counselling and explaining that the common adverse effects (menorrhagia, pain) will last only for the initial few cycles. However, the largest group of refusals were due to refusal of spouse or the mother in law. The family unit being very strong in India and with joint decisions being taken for every issue cannot be ignored. Counselling women regarding the IUCD/ PPIUCD as a contraceptive method would thus involve counselling of her partner and other family members as a unit and not an individual. Poor staff awareness was found in one study and this may also be a reason in primary health centres.[9]

Another derivative author got from this study was the need for repeated counselling at every trimester. The initial willingness for PPIUD dropped from 29.5% to 9% (those who finally got the PPIUCD inserted). Although this wasn't the aim of our study, but authors feel that repeated counselling and emphasis on the benefits of the PPIUCD, would lead to better acceptance levels at the time of delivery and the woman would be ready and more willing for the insertion in the labor room. Also counselling that this method can be used intra caesarean also needs to be emphasized as most of the women were unaware of this aspect. A recent study found that providing PPIUCD in the immediate postpartum period has high acceptability and more than 75% users are satisfied and consider it as a contraceptive option.[10]

The large unmet need for contraception in our country can be solved to some extent through proper counselling and repeated discussions with the woman and her family during her antenatal visits. Counselling should be

focussed on the couple and education of other women members of the family. Increasing the use of IUCD can be brought about by encouraging postpartum insertion while being sensitive to the concerns of the mother and her family.

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