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Original Research Article

Understanding, acknowledging and accepting the knowledge regarding the complication of post-placental intrauterine contraceptive device insertion

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ABSTRACT

Background: Intrauterine devices are an effective and increasingly popular form of reversible contraception and are most effective method of long-term contraception. Post placental intrauterine contraceptive devices insertion is done within 48 hours of birth which is ideal period as women are strongly motivated to do so at this time. Aim was to understand knowledge, acceptance and complication of post placental intrauterine contraceptive device insertion.

Methods: This was a prospective observational study conducted in obstetrics and gynecology department of a tertiary care centre from 1st September 2021 to 28th February 2022.

Results: Total 84 patients were counselled out of which 50 were willing for PPIUCD out of which 48 (58%) patients PPIUCD was inserted and 2 patients were deferred.

Conclusions: PPIUCD was accepted in 50 (60%) of counselled total patients out of which most of the patients were 20-29 years having graduate degrees and were multipara. Most common cause of acceptance was that it is long term method of contraception. Most of the patients were counselled intrapartum and had vaginal method of delivery. Patients had minimum complications with most common complication of missing threads and expulsion.

Keywords: Contraception, PPIUCD

INTRODUCTION

Intrauterine devices are an effective and increasingly popular form of reversible contraception and are the most cost-effective method of long-term contraception.¹ With the ever-increasing population, India was one of the first nations in the world to implement a family planning program. The objective was to stabilize the population with regard to the potential economy of the nation.² The 2017 report of the World Bank, UNFPA, WHO, UNICEF stated that India made progress in reducing maternal mortality it still contributes 145 maternal deaths per 100,000 live births.¹ Post placental intrauterine contraceptive device is to be placed within 10 minutes of the expulsion of the placenta which can be done manually

or by Kelly's forceps. It can be after interval insertion, post abortal insertion, immediate postpartum IUCD insertion, or intra caesarean IUCD insertion. The mechanism of action of copper intrauterine devices is to prevent fertilization by causing an inflammatory reaction. Inhibition of sperm motility, reduces sperm motility, reduces sperm capacitation and survival, and sperm phagocytosis all result from the production of cytokine peptides and activation of enzymes. Family planning can prevent more than 30% of maternal death and 10% of child mortality if pregnancies are spaced more than 2 years.³ The immediate postpartum period is 48 hours of birth and is an ideal period for counselling for child spacing, exclusive breastfeeding and PPIUCD as women are strongly motivated to do so at this time.

Medical eligibility criteria for PPIUCD^{2,4}

It gives guidance regarding whether a woman with certain conditions can safely use a given method of family planning. Category 1: conditions where there is no restriction for the use of the contraceptive method. Category 2: conditions where the advantage of using the method outweighs the risks. Category 3: conditions where the risk usually outweighs the advantage of using the method. Generally, should not be used. Category 4: unacceptable health risk if the contraceptive method is used. Not to be used.

In this study we have used Copper-T 380A as it was easily available, free of cost, and long-term contraceptive effect.

Advantages include safety, convenience, long-term contraception, free of cost by government, no effect on lactation or any risk of uterine perforation, and reduced possibility of heavy bleeding. PPIUCD is the only PFP method for mothers wanting an extremely effective, reversible yet long-acting family planning method which is initiated during the immediate postpartum period in lactating women.

Contraindications for PPIUCD include puerperal sepsis, hemoglobin >8 gm%, PPROM >12 hours, significant genital trauma from delivery, postpartum hemorrhage, chorioamnionitis, uterine anomalies and women with HIV/AIDS.

Complications of PPIUCD are partial or complete expulsion, menstrual irregularities, menorrhagia, missing string.

The failure rate of IUCD is 0.8%.⁵

Aim

Aim was to understand knowledge, acceptance and complications with post placental intrauterine contraceptive device insertion.

Objectives

To study maternal compliance to the device. To assess safety of post placental IUCD insertion in terms of complications immediately after expulsion of placenta.

METHODS

Study design and period

It was a prospective observational study. The study took place from September 2021 to February 2022.

Place of study

This study was carried out at the department of obstetrics and gynecology, Dhiraj hospital Vadodara.

Sample size

A total of 80 patients were included in the study.

Inclusion criteria

Women coming in early labor were counselled for post placental insertion of Cu-T. Those who opted for the method were included in the study.

Exclusion criteria

Postpartum hemorrhage, PROM >12 hours, congenital uterine anomalies, all contraindications to conventional IUCD insertion.

Post placental insertion of IUCD (Kelly's forceps)

To be inserted within 10 minutes of expulsion of placenta, after the active management of third stage of labor.

IUCD was placed through Kelly's forceps once it was inserted and resistance was felt, the left hand placed on the fundus of the uterus for confirmation of proper placement by feeling the thrust of the instrument on the fundus. Once confirmed the forcep should be slowly opened and removed from the uterine cavity, making sure that the IUCD doesn't get dislodged. Post insertion detailed follow up, how to check for missing threads and when to come for follow-up were explained.

Intra cesarean insertion of IUCD

The IUCD was held between index and middle fingers and passed through the uterine incision till fundus was reached after which the uterine incision was closed.

RESULTS

A total 84 patients were counselled for PPIUCD out those 50 (60%) patients gave the consent of which only 48 (58%) patients went through the procedure. The majority of patients were of age 20-29 years 44 (87.6%) patients. Most of the females accepting PPIUCD were graduates 24 (47.6%) patients which tell education played an important role in acceptance. multiparity 33 (66.6%) patients were the main reason of accepting the PPIUCD while primi were only 17 (33.3%).

Most common reason for acceptance of PPIUCD were long term contraception and safe contraception during breastfeeding with 27 (32.3%) and 26 (31.4%) patients.

Intrapartum counselling has been shown to be effective 27 (53.3%). Majoraity of patient in whom PPIUCD was inserted delivered vaginally 31 (61.9%) patients.

Total 27 (33%) showed complications out of which 21 patients PPIUCD were inserted post vaginal delivery and 6 patients were post LSCS.

Where the major complication was the expulsion of PPIUCD on 15 days to 6 weeks with pain in the abdomen 7 (33%) was seen while bleeding and missing thread was only in 4% patients.

Table 1: Distribution of patients.

Criteria	Number	Percent
Number of patients accepted insertion of PPIUCD	50	60
Number of patients inserted	48	58
number of patients refused	33	39.60
Number of patients deferred	2	2.20
Total number of patients counselled	84	100

Rate of acceptance increases with proper counselling.

Table 2: Socio-demographic profile.

Socio demographic characteristics	Accepted N=50		Declined N=33	
	No.	%	No.	%
Age (years)				
Less than 19	1	1.90	1	1.40
20-29	44	87.60	30	91.30
29-39	5	10.40	2	7.20
≥40	0	-	0	-
Education				
No formal education	0	-	0	-
Graduate	24	47.60	4	13.00
Secondary primary	16	32.30	26	78.30
Post graduate	10	20.00	3	8.70
0	0	-	0	-
Parity				
Primipara	17	33.30	13	39.10
Multipara	33	66.60	20	60.90

Age does not affect acceptance of PPIUCD. Higher the level of education more the acceptance.

Parity did not have any effect on acceptance of PPIUCD.

Table 3: Reason for acceptance of PPIUCD.

Reason for Acceptance	Number N=84	Percent
Long term contraception	27.132	32.30
Reversible	6.384	7.60
Safe contraception during breastfeeding	26.376	31.40
One time procedure	3.948	4.70
Could not pinpoint the exact reason of acceptance	30.324	36.10

The most common for acceptance was because it's long-term method of contraception.

Table 4: Acceptance according to timing of counselling.

Period of counselling	Accepted N=50		Declined N=33	
	No.	%	No.	%
Antenatal	19	38.00	17	50.70
Intrapartum	27	53.30	11	33.40
Immediate postpartum	4	8.50	5	15.90

Most of the patients that accepted insertion were counselled intrapartum. intrapartum counselling has been shown to effective.

Table 5: Mode of delivery.

Mode of delivery	Number N=50	Percent
Vaginal	31	61.90
Caesarean section	19	38.00

Majority of the patients in whom PPIUCD was inserted delivered vaginally.

Table 6: Complications.

Complications N=27 (33%)	Vaginal N=21 (78%)		LSCS N=6 (22%)	
	No.	%	No.	%
Expulsion				
Within 7 days	-	-	-	-
1 week to 15 days	1	4	-	-
15 days to 6 weeks	5	23	3	50
Bleeding	1	4	1	16
Pain in abdomen	7	33	2	33
Displaced cord	-	-	1	16
Perforation	-	-	-	-
Missing threads	1	4	4	67

DISCUSSION

Total 84 patients were counselled for PPIUCD out of which 50 patients were willing for insertion of PPIUCD and 33 were not willing for same. Of the 50 patients, insertion of PPIUCD had to be deferred in 2 patients; hence PPIUCD was inserted in total 48 (58%) patients. This show rate of acceptance increases with proper counselling.

Age

Most of the patients who had PPIUCD inserted were between the age group of 20-29 (87.6%) which is reproductive age group.

In the study conducted by Kittur et al, 77.1% of the patients that accepted PPIUCD were from the age group of 20-30 years which was similar to our study.⁶

In the similar study carried out by Rukiya et al, 52% of the patients were from the age group of 20-29 years.⁷

Education

All the patients that accepted insertion of PPIUCD had at least some formal education whereas 13% of the patient that declined insertion of PPIUCD were illiterates, implying the importance of education family planning.

In the study conducted by Kittur et al, 24% of the patient that had no formal education were willing for insertion of PPIUCD.⁶

In the study conducted by Geeta et al, 35% of mothers were illiterate and were willing for insertion of PPIUCD.⁸

Thus, education is important for acceptance of PPIUCD.

Parity

In our study, majority of patients that accepted insertion of PPIUCD were multipara (66.6%).

Geeta et al, found that majority of the patient in whom PPIUCD was inserted were multipara (57.8%).⁸

In a similar study by Sujnanendra et al, 32.6% of the patients in whom PPIUCD was inserted were multipara.⁹

Reasons for acceptance of PPIUCD

In our study, the most common reason for acceptance of insertion of PPIUCD was because it is a long-term contraception (32.3%). 31.4% accepted it as it is safe during breastfeeding.

Most of the reason why the patients in this study have accepted insertion of PPIUCD are attributed to proper counselling by trained medical personnel.

Period of counselling

53.3% of patients that accepted insertion of PPIUCD were counselled in the intrapartum period.

Most of the patients were unbooked and presented to us early labour.

Our study was comparable to study conducted Lakshmi et al, where 73% of the patient were counselled intrapartum.

Complications

Complications were encountered in 33% of the patients.

The rate of complication was more in vaginal group than in the LSCS group.

In the study conducted by Gupta et al, the rate complication was comparable. The most common complication in the vaginally delivered group was spontaneous expulsion of IUCD (6.6%), while the most common complication in the intra cesarean group was bleeding per vaginum (5.3%).

In the study conducted by Geeta et al, the rate of complications was 23.4% the most common complication being minor abdominal complaint constitutes 12.9%.⁸

In a study conducted by Kittur et al, the complication was 50%, the most common complaint encountered was pain in abdomen (43%).⁶

The limitation of this study are inadequate sample size and follow-up was very short more studies trails need to be conducted to validate the results of this study.

CONCLUSION

India is country where there is extremely high unmet need for contraception. Women's desire for contraception, immediately post-delivery is high, but most post patients are not counselled for contraception immediately post-delivery and some don't have access. Postpartum period is time when women are highly motivated for contraception.

PPIUCD is an effective and safe method of post partum family planning as it is cost effective, long term and does not affect lactation. It has minor reports of complications but the benefits of PPIUCD generally out weight the risk.

Education affects overall acceptance rate of PPIUCD. Counselling by trained medical and paramedical personnel is important for the acceptance of PPIUCD.

We had an encouraging acceptance and continuation rate with small discontinuation rate. The complication reported in our study were minor and had no major effect on the overall health of patient.

Every patient should be counselled for post-partum contraception.

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Conflict of interest: None declared

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

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