

ORIGINAL RESEARCH

Clinical outcome and continuation of use of postpartum IUCD: A retrospective cohort study

¹Dr. Veena M Pillai, ²Dr. Aradhana Radhakrishnan, ³Dr. Patsy Varghese, ⁴Dr. Lekshmi Murukesan

^{1,2}Assistant Professor, Department of Obstetrics and Gynaecology, Sree Gokulam Medical College, Trivandrum, Kerala, India

³Professor, Department of Obstetrics and Gynaecology, Believers Church Medical College Hospital, Thiruvalla, Kerala, India

⁴Professor, Department of Obstetrics and Gynaecology, Sree Gokulam Medical College, Trivandrum, Kerala, India

Corresponding Author

Dr. Aradhana Radhakrishnan

Email: aradhana250177@gmail.com

Received: 10 March, 2024

Accepted: 21 April, 2024

ABSTRACT

Abstract: In India, despite the provision of free intrauterine contraceptive devices (IUCDs), their uptake remains low. This retrospective cohort study conducted at Sree Avittom Thirunal Hospital, South India, evaluates the clinical outcomes and continuation rates of postpartum intrauterine contraceptive devices (PPIUCDs) over a four-year period (2011-2015). The study included women aged 18-45 who had PPIUCDs inserted immediately postpartum or during caesarean sections. Outcomes measured were complications such as pain, bleeding, infection, contraceptive failure, and expulsion, alongside client satisfaction and continuation rates. Findings indicate a significant unmet need for effective contraception during the postpartum period, despite high awareness levels. The common complications observed were pain and menorrhagia, with a notable rate of device expulsion and removal driven primarily by these complications. Client satisfaction was moderate, with approximately two-thirds of participants opting to continue using the PPIUCD. The study underscores the critical need for improved provider training and client education to enhance the acceptance and sustained use of PPIUCDs, potentially impacting maternal health outcomes positively by ensuring effective and timely contraceptive use.

Key words: PPIUCD, Contraceptive continuation, postpartum family planning, maternal health

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

INTRODUCTION

Contraceptives have been used in one form or another for thousands of years –throughout human history and even pre-history. In fact family planning has always been widely practiced, even in the societies dominated by social, political, or religious codes that required people to “be fruitful and multiply”-from the era of Pericles in ancient Athens to that of Pope Francis today.

India, with her current population of 1.42 billion, has now become the most populous country in the world according to recent demographics. India has made a huge step in decreasing the maternal mortality ratio over the past years through her meticulous family planning measures but she still claims a 20% of the maternal deaths worldwide, according to the 2012 World Bank report. An efficient family planning system can avert 30% of such deaths by creating

awareness for the need of adequate spacing between subsequent pregnancies. This calls for an awakening of better family planning methods and measures to combat the unmet need of a reproductive woman. The Reproductive and child health program in India, through government’s family planning program emphasizes on offering high quality contraceptive services to our reproductive population on voluntary basis. Recent reports estimate that almost one in five married contraceptive users is currently using an IUCD as it is a highly efficient temporary method of protection with the added convenience of not requiring an active participation of the user. According to the DLHS-3 survey of 2007-2008, only two-thirds of the women were aware of IUD in the age group 15-24 years, women with no living child and rural background. Only 60.5 percent of non-literate women were aware of IUD as compared to

93.6 percent among women educated for 10 or more years. Despite the fact that the government offers IUCD services free of cost and IUCD is one of the most effective reversible and safe contraceptive methods, it still remains largely underutilized in our country. Concern about the side effects of IUCD, fear of the plausible infection and infertility related to it combine to discourage its use. As institutional deliveries have risen in numbers in India, postpartum period is now recognized an opportune time for offering family planning services to the women, who have just delivered at health facilities and want to prevent unintended pregnancies or delay having more children. Moreover, in the postpartum period unmet need for family planning is very high as women believe themselves to be protected in the period of lactational amenorrhoea. Postpartum women who breastfeed their infants can use Cu IUCD safely, as it does not interfere with breastfeeding. Postpartum IUCD can be inserted immediately after vaginal delivery, during caesarean section and up to 48 hours after birth, before women get discharged from the health facilities.

RATIONALE

The high morbidity and mortality risk to the mother and baby during the post postpartum period designates it with its high critical status. Women believe themselves to be under the blanket coverage of her lactational amenorrhoea and hence become susceptible to the risk of unintended pregnancies during this period and this with the knowledge that inadequate spacing between subsequent pregnancies can lead to multiple complications for both the mother and foetus demands the need for efficient family planning methods to be adapted in the immediate postpartum period.

IUCD has now become popular method worldwide as it offers highly effective, long term protection against pregnancy, with prompt return to fertility upon removal and is convenient. But it still is markedly underutilized in India. One of the main reasons for this is that many health service providers and potential clients lack accurate information about it. It is often found that the advantages are understated, the complications are exaggerated so that many misconceptions have grown in to the community even among the providers. This also leads to high discontinuation rate amongst the copper-T users. The discontinuation rate is due to the problems related to the provider's knowledge and skill leading to improper selection of clients, not following recommended steps of insertion, poor counseling and lack of follow up, all resulting in poor quality of services. Sree Avittom Thirunal Hospital, the setting of this study, a leading referral centre in south India, has been instrumental in the active provision of family planning services in the state of Kerala.

AIMS AND OBJECTIVES

PRIMARY OBJECTIVES

To study the clinical outcome (in terms of complications-pain, bleeding, infection, contraceptive failure, expulsion) in women in whom the PPIUCD have been inserted.

SECONDARY OBJECTIVES

To determine client satisfaction (in terms of if they still continue to retain it and their reaction to the complications).

MATERIALS AND METHODS

STUDY DESIGN

Retrospective cohort study.

STUDY SETTING

Department of Obstetrics & Gynecology, Sree Avittom Thirunal Hospital.

STUDY POPULATION

Those who underwent postpartum IUCD insertion at Sree Avittom Thirunal Hospital.

STUDY PERIOD: 4 yrs.

SAMPLE SIZE

All subjects who have inserted PPIUCD from 2011-March to 2015.

STUDY SUBJECT

Study group includes those women of age group 18-45 yrs in whom PPIUCD have been inserted in the postpartum and post LSCS period.

SAMPLING METHOD

All consecutive parties fulfilling the eligibility criteria were enrolled and followed up (Universal Sampling Method).

INCLUSION CRITERIA

- *Women of age group 18-45 yrs.
- *Women undergoing postpartum insertion in postpartum period.
- *Those willing to give informed consent to study.

EXCLUSION CRITERIA

- *Women with previous history of menorrhagia, ectopic pregnancy, pid.
- *Those not willing for follow up even for the first follow up.

INSERTION TECHNIQUE

In SAT Hospital, PPIUCD insertion is done by trained obstetricians. Women who are willing for PPIUCD and who have met the inclusion criteria are selected for insertion. After active management of third stage of labour, PPIUCD is inserted by the standard insertion technique.

FOLLOW UP METHOD

Patients who have already inserted PPIUCD in the years 2011-mar,2015 will be followed up and their complications at the end of 6 mths, 1st yr,2nd yr and 3rd yr will be analyzed separately through statistical analysis. Also patients satisfaction will be accounted for, with special reference to the number of patients still retaining the IUCD.

STUDY TOOL

Questionnaire based study.

STUDY VARIABLES: Major outcome variables are

1. Complications which include pain, menstrual irregularities, expulsion, failure.
2. Client satisfaction.
3. Discontinuation of PPIUCD.

STATISTICAL ANALYSIS: Data were analyzed using the computer software (Statistical package for Social Sciences-SPSS version10). To elucidate the associations and comparisons between two groups, Chi square test was used as non-parametric test. For all statistical evaluations,a probability value of less than 0.05 was considered significant.

ETHICAL ISSUES

Approval of the study was taken from HUMAN ETHICAL COMMITTEE, Medical College, Trivandrum. After getting institutional consent, the participants were approached for obtaining their willingness to participate in the study. During data collection prime consideration was given for privacy and autonomy of the participants. Confidentiality of the entire data obtained for each participant has been strictly maintained.

DISCUSSION

The study group consists of all patients who have inserted PPIUCD at SAT Hospital in the time period of 4 years (2011-March-2015). Of the 207 patients who had undergone PPIUCD insertion in this time period, a total of 159 patients were followed up after excluding the patients who were lost to follow up, those not willing to give consent for the study and those with previous history of menorrhagia, pelvic inflammatory disease and ectopic pregnancy. PPIUCD insertion is so called when the copper-T is inserted within 72 hours from delivery time. All patients of the study group underwent the copper-T insertion by standard method as prescribed the family planning division of the Ministry of Health and family welfare.

The patients were followed up with a questionnaire retrospectively at 6 months,1 year, 2 year and 3 year to assess the complications that occurred. The occurrence of menorrhagia, dysmenorrhea, fever, discharge p/v dyspareunia, failure, ectopic pregnancy, removal were followed up.

Majority of the patients belonged to the age group of 18-24 (40.8%) followed by 25-29 (37.7%) This is in accordance with the hospital statistics during the time where in 42.6% of the labour room emissions belonged to the age group 18-24, 35.5% belonged to the age group 25-29,12.5% belonged to 30-34, 3.3% belonged to below 35 years. According to the study by Jairaj et al., (1), the mean age of acceptance of IUCD was 23.70 +2.95 years. Another study by Usha Ram et al.,that the unmet need of family planning was maximum amongst the age group of 20-24 yrs (2). A study in Nigeria showed that the amongst the 852 PPIUCD acceptors 32.5% belonged to the age group 25-29 (3).

Most patients followed up in the study were Hindus(74%) and belonged to the rural community (79.8%). This is probably because of the fact that the majority of patients to SAT hospital belong to the Hindu and rural community.

Majority of patients were educated until high school (44.02%) followed by higher secondary (42.76%).This is the accordance with the practice amongst the rural population of Trivandrum (to which population SAT hospital caters its service most), wherein the girls post their high school or higher secondary education are married off early making the majority of the patient population to belong to an younger age group (18-24) and of high school /higher secondary education. So the contribution of graduates to SAT hospital's patient population is less (13.2%). But according to the study by Usha et al., with increase in education of the women so does increase the use of contraceptive practice(2).

83.6% of the patients who had undergone the PPIUCD insertion had at least one pregnancy that had crossed the viable period. And 95.5% of the patients had inserted their copper-T post caesarean. This was probably due to the fact that the multigravidas who underwent LSCS were opting for PPIUCD as they preferred this as a method by which they can limit child birth even in situations where they are unsure about the current baby's health (preventing them from immediate sterilization). Primi gravidas on the other hand are less motivated to adopt an immediate postpartum method of contraception to limit their family size, when compared to the multigravidas.

The complications related to ppiucd insertion were menorrhagia(35.2%) pain (36.4%), discharge p/v (19.4%), dyspareunia (1.8%), fever (1.8%), expulsion (1.8%), failure (0.62%). Occurrence of complications was maximum around 6 months since-insertion. 6.9% of the patients complained of discharge at 6 months and one year of age.1.8 (%) of the patients complained of expulsion at 2 years as compared to 0.62% at both 6 months and 1 year since insertion. In the study by Garuda Lakshmi out of 220 patients who had inserted PPIUCD, 38 patients lost to follow up, removal rate was 22 and continued in 160.The total complications were 68 (Expulsion 12, Bleeding 20, Strings not visible 32, infections 4,Pregnancy 0)(5).

32.8% of the patients (i.e. 52 patients) removed/expelled the PPIUCD in my study compared to the 67.2% who still retained it. Of the patients who had removed the IUCD, majority of the patients removed the IUCD at 2 years (30.43%), 28.26% each of the patients removed the IUCD, at 6 months and 1 year. According to the study done by Abhilasha Gupta (6), of the 150 patients followed, the removal rates of PPIUCD was 5.6%. In another study done by Hema Mohan (7), in which interval IUCD was compared to PPIUCD and the removal rate was almost similar in both the groups (6.5% V/S 7%). Of the total 47 patients who had removed the IUCD, 25.5% of the patients had removed the IUCD due to increased bleeding p/v during subsequent menstrual cycles.

It should be noted that these parties did not have menorrhagia before this pregnancy and those who had were exempted from the study. Other causes for removal noted were pain (19.1%) to sterilize (19.1%), to conceive (14.8%), infection (12.7%), and others (8.5%). Amongst the other reasons were-3 patients removed the IUCD once their husbands had gone abroad, 1 patient removed the IUCD following failure of IUCD (intrauterine pregnancy). In the study by Somesh Kumar et al., where in 2733 patients who inserted PPIUCD at 16 health facilities in 8 different states of India were studied a small proportion of the study group, 120 women (3.8%), had their PPIUCD removed. Women most commonly reported expected side effects of IUCDs as the reasons for the removal, including bleeding and abdominal pain (8).

62% of the patients were satisfied with the PPIUCD compared to the 31.4% who were unsatisfied post insertion and the 9.4% who were unsure about the PPIUCD. In the study by Somesh Kumar el(8), nearly all women were satisfied with their choice of IUCD at

the time of insertion and over 90% reported that they were happy with the IUCD at six weeks following insertion. The present study also was suggestive that satisfaction rates were higher with PPIUCD than the interval IUD use.

There were no studies comparing the removal rate of PPIUCD and demographic data of the patient such as age, religion, education, area of residence, parity, time since insertion, route of insertion and socio-economic status of the patient. In this study wherein with statistical analysis it was proved that there was no significant association noted between the removal rate of PPIUCD and the above mentioned factors.

CONCLUSION

During the study period of 4 years, a total of 159 patients of the total 207 patients who had inserted the IUCD were studied. The acceptors of the IUCD were young, multiparous women who were educated. Most women belonged to rural area, to the Hindu community and to the lower socioeconomic status. Most women had inserted the IUCD post caesarean.

The complications most commonly observed were menorrhagia and pain abdomen. Other complications of dyspareunia, infection, failure and expulsion were minimal.

Most common reason for removal of the IUCD was menorrhagia and pain abdomen. Majority of patients were satisfied with the iucd. There was no association between the removal rate and patient details.

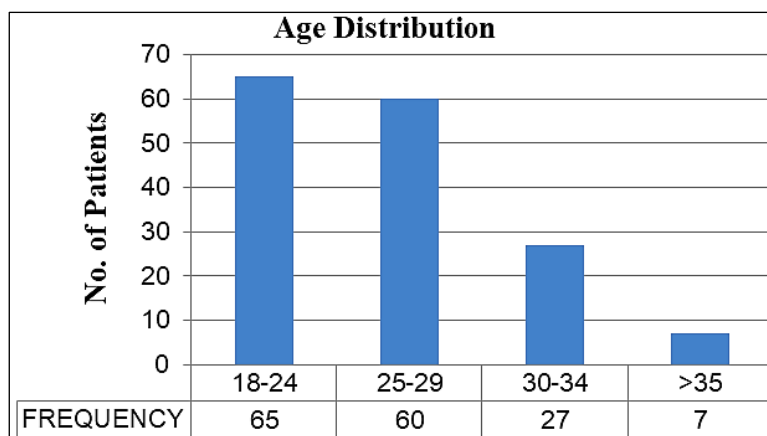
There was no association between the age, route of insertion and the parity of the ppiucd users with the major complications of pain abdomen and menorrhagia.

Advantages of ppiucd may again be emphasized to be high motivation, assurance that the woman is not pregnant and convenience.

OBSERVATIONS AND RESULTS

Table 1: Distribution According to Age

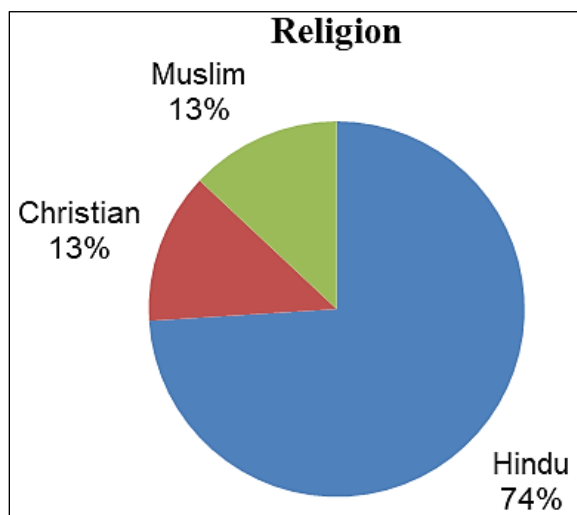
Age(In YRS)	Frequency	Percent
18-24	65	40.8
25-29	60	37.7
30-34	27	16.9
>35	7	4.4



40.8% of the clients who accepted PPIUCD insertion followed by the age group of 25-29yrs (37.7%). belong to the age of 18-24 yrs. This was closely

Table 2: Distribution According to Religion

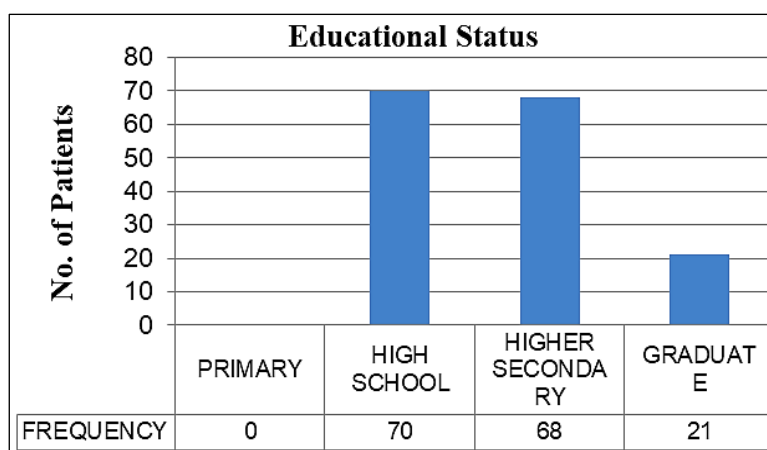
Religion	Frequency	Percentage
Hindu	118	74
Christian	21	13
Muslim	20	13



74% of the patients were hindus. Christians and Muslims contributed to 13% each.

Table 3: Distribution According to Education

Status	Frequency	Percentage
Primary	0	0
High School	70	44.02
Higher Secondary	68	42.76
Graduate	21	13.2

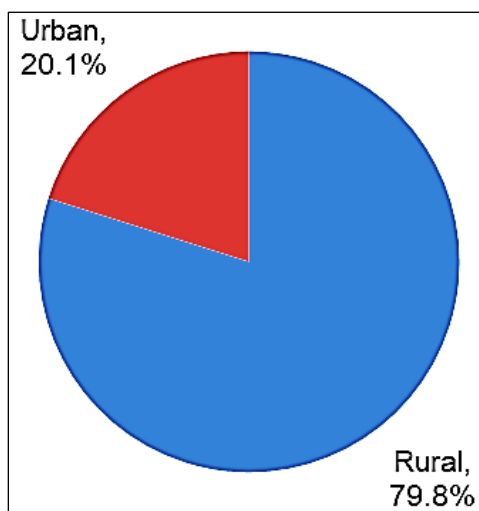


44.02% of the patients studied upto high school, contributed to only 13.2% of the total population. 42.76% upto higher secondary school. Graduates

Table 4: Distribution According to Residence

Lace	Frequency	Percent
Rural	127	79.8

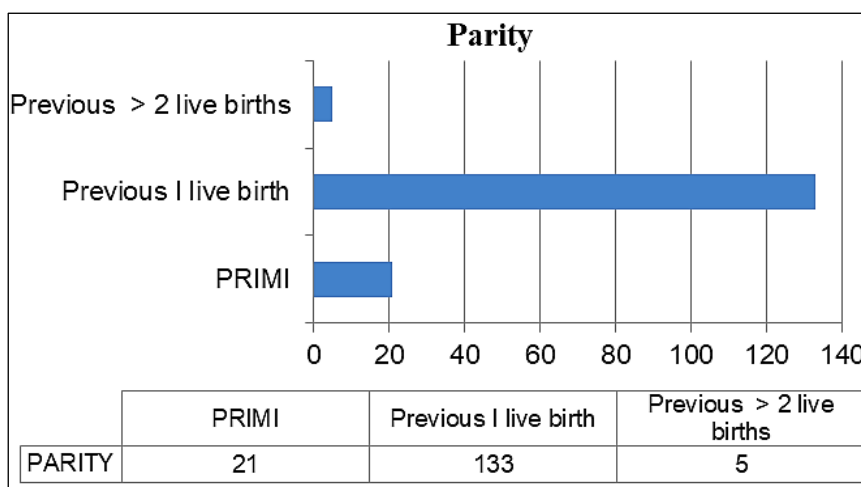
Urban	32	20.1
Total	159	



79.8% of patients belonged to rural area.

Table 5: Distribution According to Parity

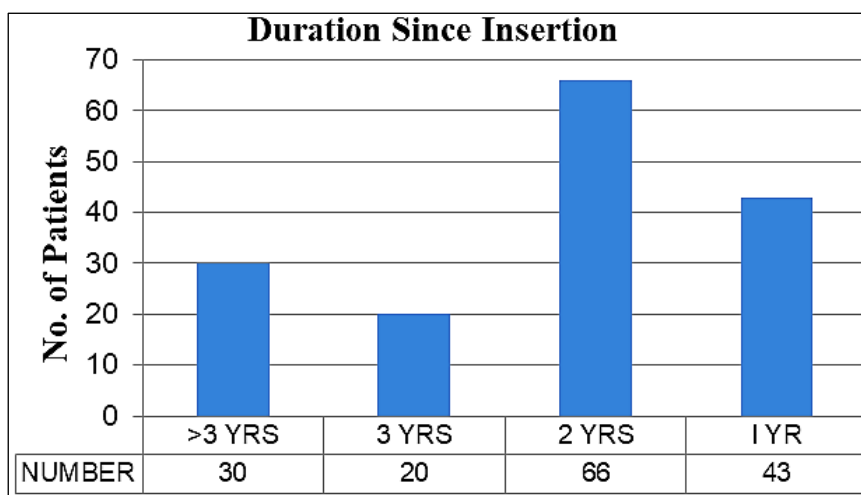
Parity	Frequency	Percentage
PRIMI	21	13.2
Previous I live birth	133	83.6
Previous ≥ 2 live births	5	3.14



83.6% of patients had history of at least I pregnancy that had crossed viable period. Primi gravidas contributed to 13.2% of the population.

Table 6: Duration since Time of Insertion

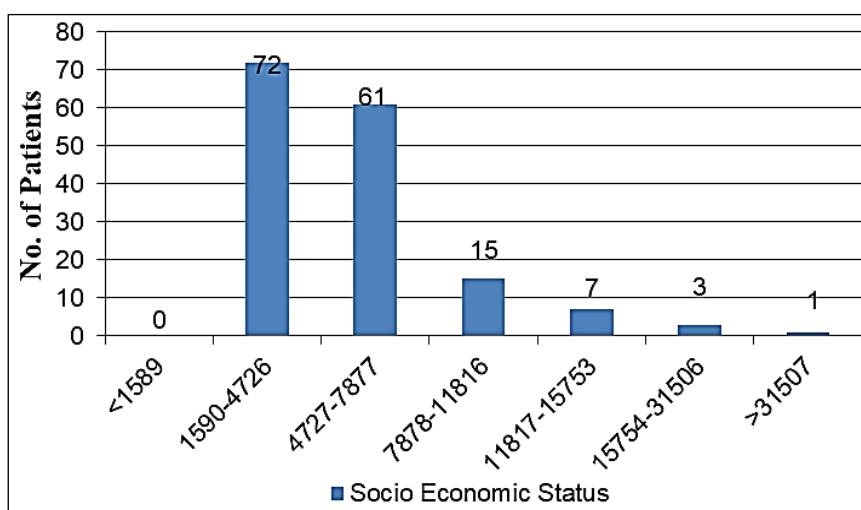
TOI	Frequency	Percentage
>3 YRS	30	18.8
3 YRS	20	12.5
2 YRS	66	41.5
I YR	43	27.04



41.5% of the patients inserted JUCD 2 yrs back.31.4% of the patients had a 3 year follow up.

Table 7: Distribution According to Socio-Economic Status

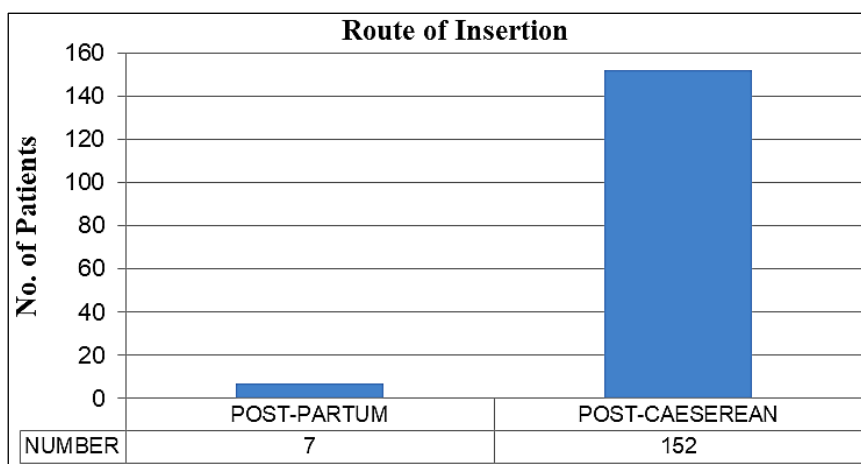
Income	No.of Patients	Percentage
<1589	0	0
1590-4726	72	45.28
4727-7877	61	38.3
7878-11816	15	9.4
11817-15753	7	4.4
15754-31506	3	1.8
>31507	1	0.62



Majority of the patients belonged to the income group incomegroup 4727-7877(38.3%). of 1590-4726(45.28%), closely followed by the

Table 8: Distribution According to Route of Insertion

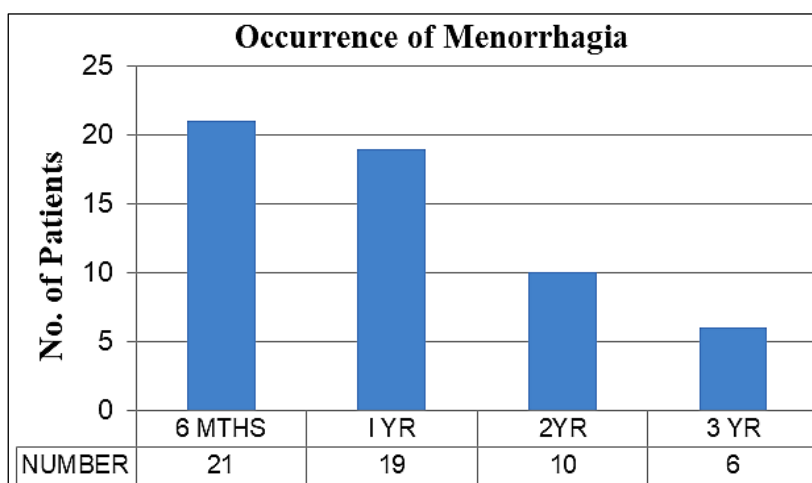
Route of Insertion	Frequency	Percentage
Post-Partum	7	4.5
Post-Caeserean	152	95.5



95.5% of the patients had inserted IUCD trans- caesarean.

Table 9: Distribution According to Occurrence of Menorrhagia

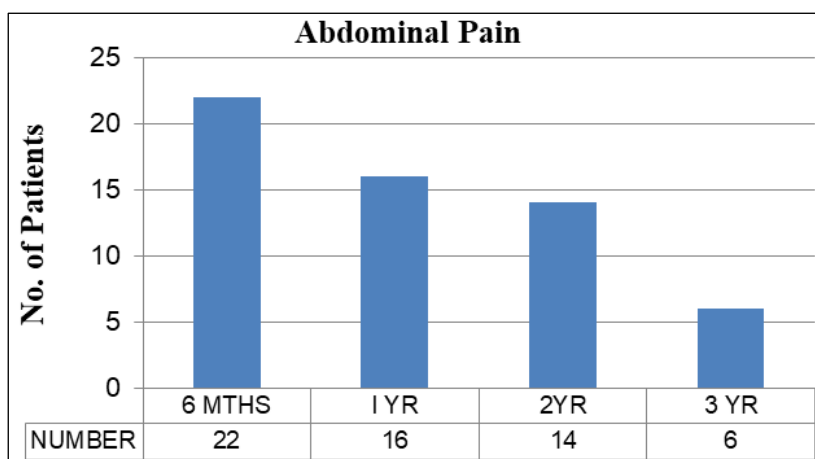
Bleeding	Frequency	Percentage
6 MTHS	21	37.5
1 YR	19	3.9
2YR	10	17.8
3 YR	6	10.7
TOTAL	56	



35.2% of the patients complained of menorrhagia while 64.8% of the patients did not. 37.5% of the patients with complaint of menorrhagia had increased bleeding at 6 months post insertion.

Table 10: Distribution of Women Who Complained of Pain

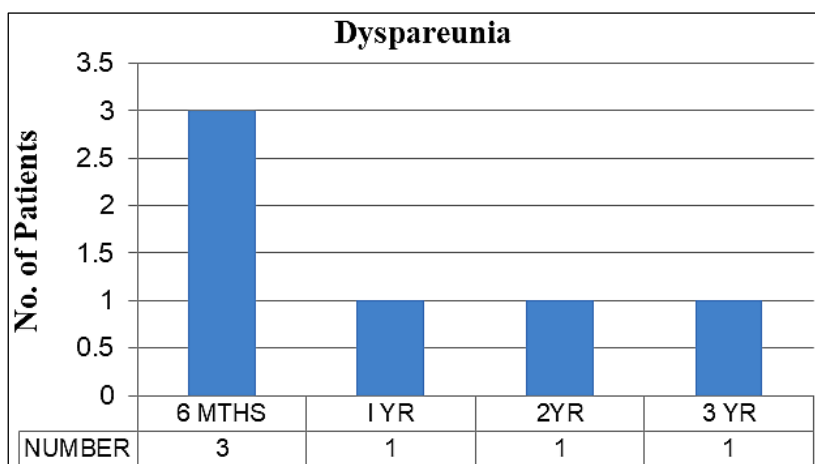
Pain	Frequency	Percentage
6MTHS	22	37.9
1 YR	16	27.5
2 YR	14	23.72
3 YR	6	10.3
TOTAL	58	



36.4% of the patients complained of increased abdominal pain post insertion while 63.6% did not. Of those who had the complaint, 37.9% had increased pain at 6 months.

Table 11: Distribution According to Incidence of Dyspareunia

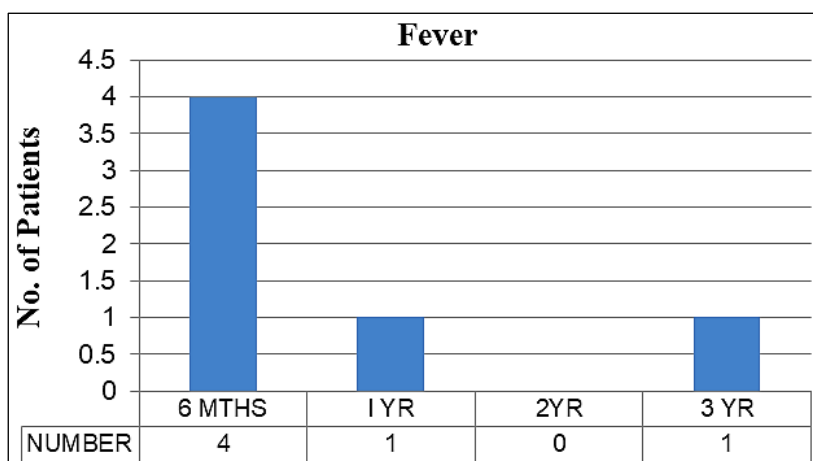
	Frequency	Percentage
6MTHS	3	50 I
1 YR	1	16.6
2 YR	1	16.6
3 YR	1	16.6
Total	6	



1.8% of the patients complained of dyspareunia following PPIUCD insertion of those who had, 50% had the symptom at 6 months.

Table 12: Distribution of Patients According to Incidence of Fever

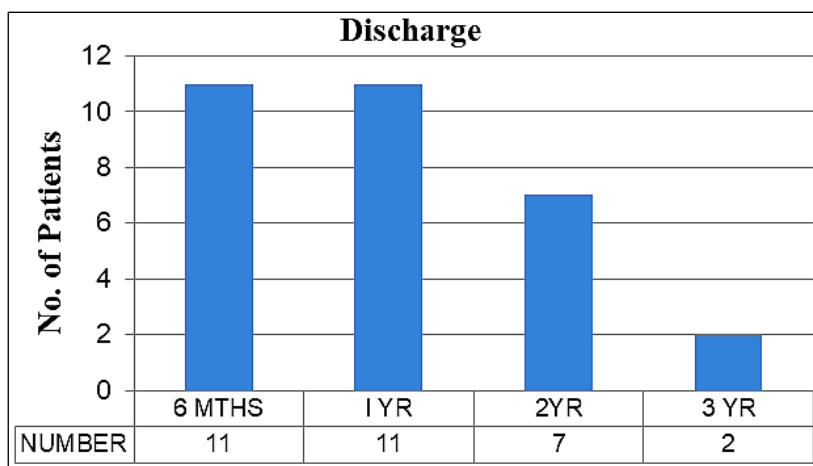
No. of Patients	Frequency	Percentage
6MTHS	4	66.67
1 YR	1	16.61
2 YR	0	0
3 YR	1	16.6
Total	6	



Only 1.8% of the patients had fever post insertion, 66.67% of whom had it at 6 months post insertion.

Table 13: Distribution According to Incidence of Discharge

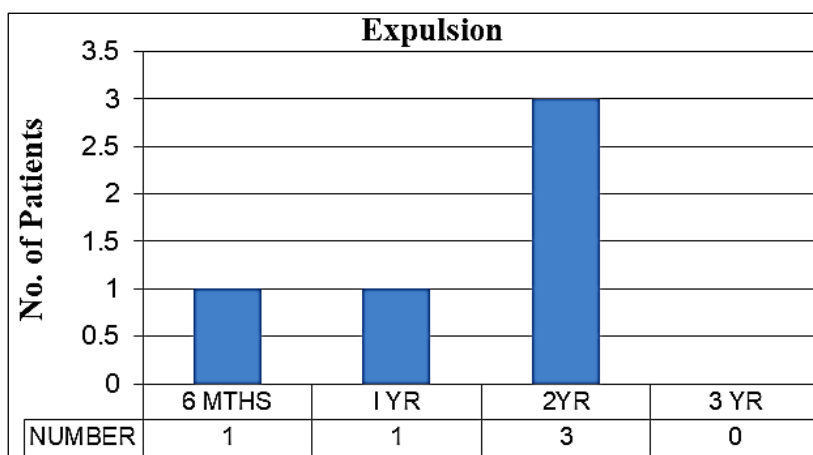
No. of Patients	Frequency	Percentage
6MTHS	11	35.48
1 YR	11	35.48
2YR	7	22.5
3 YR	2	6.4
TOTAL	31	



19.4% of the patients had increased discharge p/v symptom at 6 months and 1 year post insertion following insertion. Of these, majority had the

Table 14: Distribution According to Incidence of Expulsion

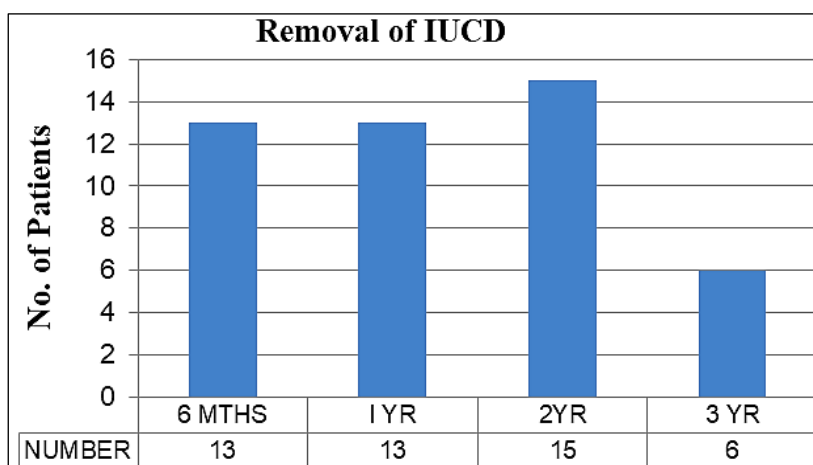
No. of Patients	Frequency	Percentage
6MTHS	1	20
1 YR	1	20
2YR	3	60
3 YR	0	0
Total	5	



A total of 5 patients (1.8% of the total patients) expelled the ppiucd, 60% of whom expelled it at the 2nd year of use, 20% expelling it <6 months and at 1 year.

Table 15: Distribution According to Removal of IUCD

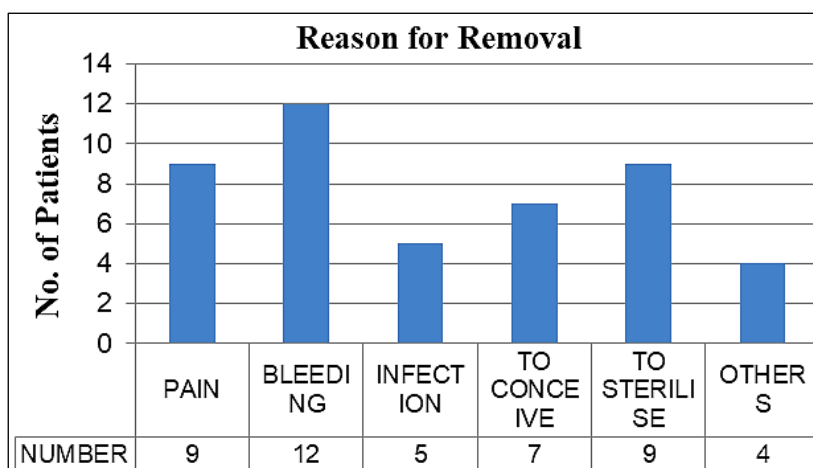
No. of Patients	Frequency	Percentage
6MTHS	13	28.26
1 YR	13	28.26
2YR	15	30.43
3 YR	6	13.04
Total	47	100



A total of 46 patients removed the ppiucd (28.9% of the total study population).Of which majority of patients removed the ppiucd at 2 years (30.43%).This was closely followed by the population who removed at <6 months and 1 year(28.26% each).

Table 16: Distribution According to Reason for Removal

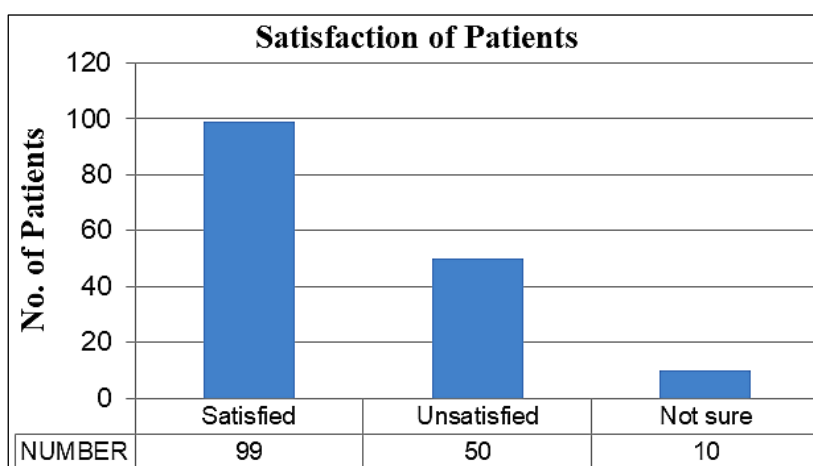
Reason	Frequency	Percentage
Pain	9	19.5
Bleeding	12	26.08
Infection	5	10.8
To Conceive	7	15.2
To Sterilise	9	19.5
Others	4	8.6
Total	46	



Of the total 46 who had removed the ppiucd, 26.08% patients who had removed the ppiucd to sterilize and of pts removed the IUCD due to increased bleeding due to pain. p/v. This was closely followed by the group of

Table 17: Distribution According to Satisfaction of Patients

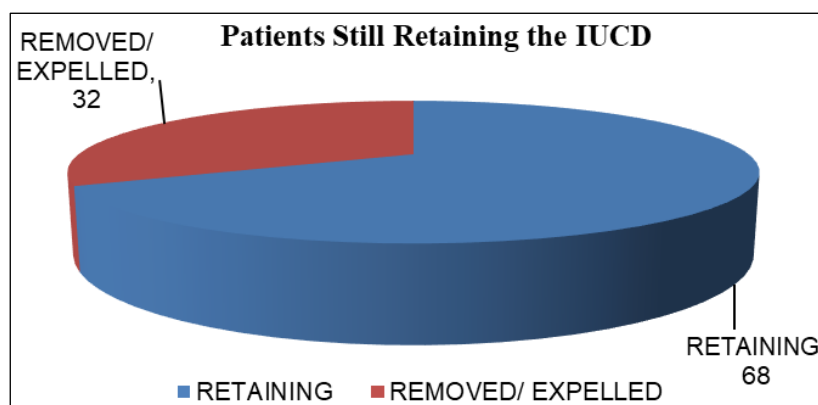
No. of Patients	Frequency	Percentage
Satisfied	99	62.2
Unsatisfied	50	31.4
Not sure	10	6.2
Total	159	



62.2% of the patients were satisfied with the PPIUCD. 31.4% were however wlsatisfied with the same.

Table 18: Distribution According to Number of Patients Still Retaining the IUCD

No. of Patients	Frequency	Percentage
Retaining	108	68
Removed/Expelled	51	32



68% of the patients still retain the postpartum IUCD. PPIUCD. While 32% have either removed/expelled the

Table 19: Association of Complication of Menorrhagia with Age of Patient Crosstab Count...

	Bleed		Total
	0	1	
<=24	49	16	65
25-29	51	9	60
Age grp 30-34	21	6	27
>=35	4	3	7
Total	125	34	159

Chi-Square value=3.79df= 3 p value=0.285.

As p value is more than 0.05 there is no association menorrhagia in the ppiucd users. between age of the patient and occurrence of

Association between route of insertion of PPIUCD and menorrhagia:

Crosstab Count...

	Bleed		Total
	0	1	
1	6	1	7
Route 2	119	33	152
Total	125	34	159

Chi square value= 0.219 df=lp value=0.639.

As p value is more than 0.05 there is no association occurrence of menorrhagia. between route of insertion of the patient and

Association of parity of patient and occurrence of menorrhagia:

	Bleed		Total
	0	1	
1	19	2	21
Parity2	101	31	132
3	5	1	6
Total	125	34	159

Chi square= 2.1 83 df=2p value=0.336.

As p value is more than 0.05 there is no association menorrhagia. between parity of the patient and occurrence of

Association between Age of the PPIUCD Users and Pain Abdomen

		Pain		Total
		0	1	
AgeGRP	<=24	47	18	65
	25-29	49	11	60
	30-34	23	4	27
	>=35	6	1	7
	Total	125	34	159

Chi square = 2.774 df=3p value=0.428.

As p value is more than 0.05 there is no association between age of the ppiucd users and occurrence of pain abdomen.

Association between Route of Insertion and Pain Abdomen

	Pain		Total
	0	1	
1 Route	5	2	7
2	120	32	152
Total	125	34	159

Chi square value=0.225 df=1 p value=0.6.35.

Asp value is more than 0.05 there is no association between route of inselction of ppiucd and occurrence of pain abdomen.

Association between Parity of Patient and Pain Abdomen

	Pain		Total
	0	1	
1	18	3	21
Parity2	103	29	132
3	4	2	6
Total	125	34	159

Chi square value=1.16df=2p value=0.558.

As p value is more than 0.05 there is no association between parity of ppiucd users and occurrence of pain abdomen.

Association between Age of Patient and Removal of PPIUCD

		Removal		Total
		No	Yes	
AgeGRP	<=24	42	23	65
	25-29	47	13	60
	30-34	20	7	27
	>=35	5	2	7
Total		114	45	159

Chi square value= 2.984 df=3p value=0.394.

Asp value is > 0.05, there is no association between age of the patient and the removal rate of PPIUCD.

Table 20: Association between Religion and Removal of PPIUCD

		Removal		Total
		No	Yes	
Religion	Hindu	85	33	118
	Christian	15	6	21
	Muslim	14	6	20
Total		114	45	159

Chi square = 0.036 df= 2 p value=0.982.

As p value is >0.05, there is no association between religion and removal rate of PPIUCD.

Table 21: Association between Education of the Patient and Removal of PPIUCD

		Removal		Total
		No	Yes	
Education	Primary	53	16	69
	HighSchool	47	22	69
	Graduate	14	7	21
Total		114	45	159

Chi square = 1.587 df= 2 p value= 0.452.

As p value is greater than 0.05, there is no association between education of the patient and removal rate of PPIUCD.

Table 22: Association between Area of Residence and Removal of PPIUCD

		Removal		Total
		No	Yes	
	Rural	88	39	127
	Urban	26	6	32
Total		114	45	159

Chi square= 1.801 df=lpvalue=0.180.

As p value is greater than 0.05 there is no association between the residence of the patient and removal rate of PPTTJCD.

Table 23: Association between Parity and Removal of PPIUCD

		Removal		Total
		No	Yes	
Parity	PRIMI	12	9	21
	P1	98	34	132
	P2	4	2	6
Total		114	45	159

Chi square = 2.688 df=2p value=0.261.

As p value is more than 0.05 there is no association between parity of the patient and removal of PPIUCD.

Table 24: Association between Time of Insertion and Removal of PPIUCD

		Removal		Total
		0	1	
Time of insertion	<6 mths	36	6	42
	1 yr	47	20	67
	2 yr	13	7	20
	≥ 3 yr	18	12	30
Total		114	45	159

Chi square value =6.611df= 3 p value=0.085.

As p value is greater than 0.05, there is no association between the time of insertion and removal of PPIUCD.

Table 25: Association between Socioeconomic Status and Removal of PPIUCD

		Removal		Total
		0	1	
SES	<1589	51	22	73
	1590-4726	46	15	61
	4727-7877	10	5	15
	7878-11816	4	2	6
	11817-15733	2	1	3
	15754-31506	1	0	1

Total	114	45	159.
-------	-----	----	------

Chi square value= 1.229 df= 5 p value=0.942.

As p value is 0.942, which is greater than 0.05, there is no association between the socio-economic status of the patient and the removal of PPIUCD.

Table 26: Association between Route of Insertion and Removal of PPIUCD

		REMOV		Total
		0	1	
Route	1	3	4	7
	2	111	41	152
Total		114	45	159

Chi square square=3.002 df= 1 p value=0.083.

Asp value is 3.002, which is greater than 0.05, there is no association between the route of insertion and the removal of PPIUCD.

References

- Jairaj S, Dayyala S. A Cross Sectional Study on Acceptability and Safety of IUCD among Postpartum Mothers at Tertiary Care Hospital, Telangana. *J Clin Diagn Res*, 2016 Jan; 10(1):LC01-4.
- Contraceptive use among young married women in India; Usha Ram, Ph.D. Profile of intrauterine contraceptive device acceptors at the University of Uro Teaching Hospital, Uyo, Nigeria. *Abiasatti AM, Bassey EA, Edema EJ et al.*, 2008; Mar; 7(1):1-5
- Ppiucd, a success story at vvh: a retrospective study; K.M.Sunanda, Sudha H.C2.
- Garuda Lakshmi, Kambham Suhasini, Neelohita B; Clinical outcome of Ppiucd-intra-caeserean insertion.
- Abhilasha Gupta, Aruna Verma, Jyoti Chauhan; Evaluation of PPIUCD versus interval IUCD (380A) insertion in a teaching hospital of Western U.P. *Int J Reprod Contracept Obstet and Gynec* 2013; 2(2): 204-208
- Hema Mohan, Rekha Ramappa, Sandesh M, Akash B.K et al., PPIUCD versus interval IUCD (380a) insertion: a comparative study in a referral hospital of Karnataka, India; *Int J Reprod Contracept Obstet Gynecol*. 2015 ; 4(6): 1730-1732
- Somesh Kumar, Reena Sethi, Sudarshan Balasubramaniam et al., Women's experience with postpartum intrauterine contraceptive device use in India ; *Reproductive health* 2014, 11:32.