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Study Of Acceptance, Safety And Expulsion Of Post-placental And Intra-caesarean Intrauterine Contraceptive Device Among Postpartum Mothers In Tertiary Care Institute.

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ABSTRACT

IUCD to prevent pregnancy are among the oldest methods of contraception. The modern IUCD is a highly effective, safe and rapidly reversible method of contraception. To evaluate the acceptance, safety, expulsion and complication rates of post-placental and intra-caesarean insertion of intrauterine contraceptive device (IUCD). To study the sociodemographic profile of parturient among postpartum mothers. This prospective observational study included 93 postpartum mothers in a tertiary care centre in Central India, who delivered vaginally or by caesarean section and gave informed consent for IUCD insertion post-delivery. They were followed up to 6 weeks. The reasons for both acceptance/nonacceptance were recorded. Data was analysed in Microsoft Excel (Windows 11) and SPSS version 26.0. Out of the 220 subjects counselled, 93 (42.2%) accepted immediate PPIUCD insertion. The mean age of study participants was 25.51 ± 4.28 years. The expulsion rate was 3.7%, and 11.11% of cases discontinued PPIUCD. No case of pregnancy was reported, and 80.2% of patients were satisfied with IUCD after 6 weeks. Post-placental and intra-caesarean insertion of IUCD is safe contraception, with a high acceptance rate and low expulsion rate. These findings suggest that IUCD can be considered as a viable option for postpartum contraception.

Keywords: IUCD, postpartum, acceptance, safety.

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INTRODUCTION

Intrauterine contraceptive devices (IUCDs) have been used as a reliable method of contraception for decades. Among the different types of IUCDs, the Post-placental and intra-caesarean insertion of IUCDs (PPIUCD and IC-IUCD) have gained popularity among postpartum mothers due to their high efficacy, long-term use, and convenience [1, 2]. PPIUCD and IC-IUCD are inserted immediately after expulsion of placenta, reducing the need for a separate appointment for insertion, and providing an opportunity to avoid an unintended pregnancy during the postpartum period [3-5]. However, concerns about the safety of these devices, the risk of expulsion, and the level of acceptance among postpartum mothers have also been reported. These concerns can discourage women from choosing PPIUCD or IC-IUCD as their preferred method of contraception. Therefore, it is crucial to conduct studies to evaluate the acceptance, safety, and expulsion of IUCD among postpartum mothers.

Aims

This study aims to evaluate the acceptance, safety, expulsion and complication of Post-placental and intra-caesarean insertion of intrauterine contraceptive device among postpartum mothers. To study the socio-demographic profile of parturient as regards to acceptance/nonacceptance among study population.

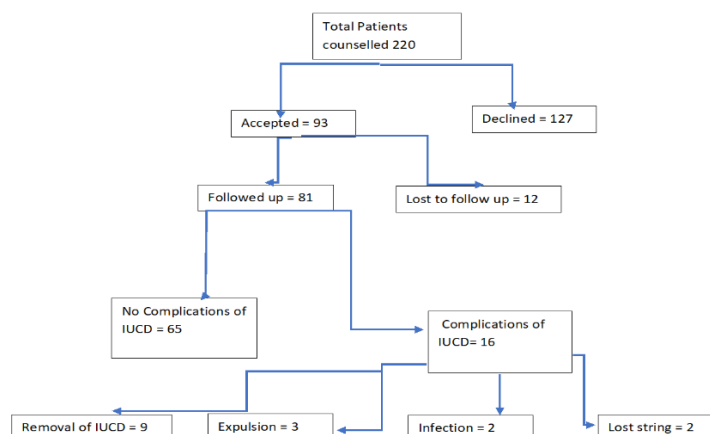
MATERIAL AND METHODS

The study was conducted at the obstetrics and gynaecology department of a tertiary care centre in Central India from September 2020 to June 2022. The study had a prospective observational design. The study population consisted of all patients delivering at the hospital, who met the inclusion and exclusion criteria. After taking informed consent, eligible patients were enrolled in the study. All enrolled patients were counselled about PPIUCD and IC-IUCD insertion. The counselling included information about the procedure, risks and benefits, and the importance of follow-up visits. Patients who consented for Cu-T insertion post-delivery were included in the study. Total 220 patients enrolled in study out of which 93 accepted IUCD and 127 declined.

The study had several inclusion and exclusion criteria. The inclusion criteria included women aged 18-45 years, with gestational age more than 37 weeks, who delivered either vaginally or by caesarean section. Exclusion criteria included patients with haemoglobin levels below 8 gm/dl, premature rupture of membranes more than 18 hours, obstructed labour, features of chorioamnionitis, manual removal of placenta, unresolved postpartum haemorrhage, distorted uterine cavity by fibroid or congenital malformation of the uterus, HIV/AIDS, high individual likelihood of exposure to gonorrhoea or chlamydia, extensive genital trauma, fever during labour and delivery, clinical symptoms of infection during labour, postpartum haemorrhage, and coagulation disorders. Patients with diabetes mellitus or hypertension were also excluded.

The data were analysed using appropriate statistical methods. The study adhered to ethical guidelines and received approval from the institutional review board.

Observations



RESULTS

In the present study acceptance rate was (42.2%) [table 1]. Highest acceptance was seen in the age group >35 and <20years (100%&85.7%). Maximum acceptance was seen in women with university & secondary education group (100% & 55.1%). Majority of women who belonged to urban locality (50%) and those who belonged to upper socioeconomic group (100%) accepted PPIUCD. Majority (100%) employed women accepted IUCD. Demographic factor play a statistically significant role in acceptance of IUCD (p value <0.05) [table 2]. Most women accepted IUCD as they thought it as a long-term method of contraception (37.6%) [table 3]. Most common reason for refusal was prefer to use other method (33.9%) [table 4]. Removal rate was only (11.11%) and continuation rate was (88.89%) [table 5]. (87.1%) women came for follow up at 6 week (72.3%) showed no complication [table 6].

Expulsion rate was (3.7%) and there was no case of pregnancy and perforation has been reported [table 7]. Those who came for follow up at 6 week (80.2%) were satisfied with PPIUCD and willing to retain it.

Table 1: PPIUCD acceptance

Total subject counselled	PPIUCD Accepted	IUCD not accepted
220	93(42.2%)	127(57.8%)

Table 2: Demographic profile of parturient

Variables	Accepted (n =93)	Declined (n=127)	Total	
Age				
≤20	6(85.7%)	1(14.3%)	7(3.2%)	P value 0.027
21-25	42(35.6%)	76(64.4%)	118(53.63%)	(significant)
26-30	32(45.7%)	38(54.3%)	70(31.84%)	
31-35	11(47.8%)	12(52.2%)	23(10.44%)	
>35	2(100%)	0	2(0.90%)	
Education				
Illiterate	9(34.6%)	17(65.4%)	26(11.8%)	
Primary	22(26.2%)	62(73.8%)	84(38.2%)	P value 0.0001
Secondary	59(55.1%)	48(44.9%)	107(48.6%)	(significant)
University	3(100%)	0	3(1.4%)	
Occupation				
Employed	13(100%)	0	13(5.9%)	P value 0.0001
Unemployed	80(38.6%)	127(61.4%)	207(94.1%)	(significant)
Locality				
Urban	62(39.2%)	96(60.8%)	158(71.8%)	P value 0.146
Rural	31(50%)	31(50%)	62(28.2%)	(non significant)
Religion				
Hindu	53(43.4%)	69(56.6%)	122(55.5%)	
Muslim	26(33.3%)	52(66.7%)	78(35.5%)	P value 0.009
Buddhist	12(80%)	3(20%)	15(6.8%)	(significant)
Christian	2(66.7%)	1(33.3%)	3(1.4%)	
Sikh	0	2(100%)	2(0.9%)	
SES				
Upper	7(100%)	0	7(3.2%)	
Upper Middle	43(46.7%)	49(53.3%)	92(41.8%)	P value 0.0001
Lower Middle	17(58.6%)	13(41.4%)	29(13.2%)	(significant)
Upper Lower	17(35.4%)	31(64.6%)	48(21.8%)	
Lower	9(42.3%)	35(79.5%)	44(20%)	

Table 3: Reason for accepting PPIUCD(n=93)

Reason for accepting PPIUCD	Frequency	Percentage (%)
Safe	11	11.8
Long term	35	37.6
Reversible	22	23.7
Less repeatability	10	10.8
One time procedure	6	6.5
Doctor's advice	5	5.4
No inference with breast feeding	2	2.2
Non hormonal	2	2.2
Total	93	100

Table 4: Reason for refusing PPIUCD (n=127)

Reason for refusing PPIUCD	Frequency	Percentage (%)
Chosen permanent method	8	6.3
Do not want contraception immediately	32	25.2
Prefer to use other method	43	33.9
Fear of pain/Heavy bleeding	18	14.2
Religious belief	3	2.4
Need to discuss with partner/family	11	8.7
Not enough knowledge about PPIUCD	4	3.1
Fear of cancer	1	0.8
Family refusal	6	4.7
No specific reasons	1	0.8
Total	127	100

Table 5: Reasons for removal of PPIUCD at 6 weeks

Reasons for removal PPIUCD	Frequency (n=81)	Percentage (%)
Heavy menstrual bleeding	1	1.23
Lost string	2	2.46
Family's advice to remove	1	1.23
Prefer to use other method	3	3.70
Do not want to continue	1	1.23
Pain in abdomen	1	1.23
Total	9	11.11

Table 6: Complications at 6 weeks

Complications at 6 weeks	Frequency(n=81)	Percentage (%)
Expulsion	3	3.7
Infection	2	2.1
Perforation	0	0
Lost or missing strings	2	2.1
Unusual vaginal discharge	1	1.1
Lower abdominal pain	2	2.1
Heavy/Irregular bleeding problems	3	3.2
None	68	72.3
Total	81	100

Table 7: Efficacy of PPIUCD

	Frequency (n=81)	Percentage (%)
Pregnancy	0	0%
Expulsion	3	3.7%
Removal	9	11.11%

DISCUSSION

Post placental IUCD is a long-acting reversible contraceptive used in immediate postpartum period so as to space pregnancy without interfering with breast feeding. Women are aware of Cu T as a contraceptive method but are not aware that it can also be used as Post placental IUCD. There is lack of knowledge, wrong information about IUCD which acts as a hurdle in acceptance of the IUCD. Family plays an important role in decision making therefore, prior counselling is must. The present study was conducted to evaluate the acceptance, safety, expulsion and complication rates PPIUCD among postpartum mothers.

The study found that (42.2%) of the women accepted PPIUCD, while (57.8%) did not. In study by Swati Singh et al [6] acceptance rate was (65.07%). Kanhere A et al [7] has acceptance rate of (36%). Variation seen in the acceptance rate of PPIUCD in different studies may be due to studies done in different geographic area, difference in study settings, sample size and diversity in socio-demographic characteristics. The majority of the women who accepted PPIUCD were from the age group of >35 & <20 years (100% & 85.7%) and (100%) women are employed. This was similar to study done by Kanhere A et al [7] and S. Maluchuru et al [8]. This highlights the need to target younger women with family planning services and women who are employed have late marriages and are more amenable to contraceptive advice. Maximum acceptance was seen in those who completed university and secondary level of education (100% & 55.1%) which was similar to studies done by Kanhere A et al [7] and M. Shanthini et al [9]. This explains the role of literacy as higher the education more is the acceptance rate. Maximum acceptance was seen in those belonged to urban area (50%) which was similar to study conducted by Halder et al [10] (48%). Maximum acceptance (80%) was seen in Buddhist community followed by other communities. In study by Jairaj S et al [11] and Sultana J et al [12] maximum acceptance was seen in Christian (30%) and (96%) in Muslims. This may be due to different geographical location with different density of religions in study population. Maximum acceptance was seen in upper socioeconomic group (100%) which was similar to study conducted by Mishra S [13] (20.65%). Acceptance of PPIUCD was more seen in multipara group. This finding was similar to studies done by Goswami et al [14]. Maximum women accepted PPIUCD because they thought it as a long term contraception followed by it is reversible (37.6% & 23.7%) which was similar to studies done by Kanhere A et al [7] (28% & 17%) and Dhruva et al [15] (23.6% & 23.6%). Amongst the reason for refusing and removal of PPIUCD most common reason was they prefer to use other method of contraception (33.9% & 3.70%). Similar results were seen in study done by Jairaj S et al [11] (63.97% & 40%). This may be due to lack of awareness and fear regarding PPIUCD. It is important to note that total nine cases (11.1%) removed PPIUCD, which highlights the need for proper counselling and follow-up care. Regarding complications at 6 week most common complication was heavy bleeding problem (3.2%) and (72.3%) showed no complication. These findings are similar to study done by Madhuri Ch et al [16]. The expulsion rate of PPIUCD was found to be 3.7%, which is within the acceptable range of 2-10%.

Regarding safety it was high, as no case of perforation and infection has been reported. Additionally, none of the participants reported a pregnancy after PPIUCD insertion, indicating the effectiveness of the contraceptive method. Moreover, 80.2% of the participants were satisfied and willing to retain PPIUCD after 6 weeks of insertion, indicating the acceptability and feasibility of this contraceptive method among postpartum women. However, (19.8%) of the participants reported dissatisfaction with PPIUCD, indicating the need for counselling and support to improve satisfaction rates. In conclusion, PPIUCD is an effective and safe contraceptive method for postpartum women, with an acceptable expulsion rate and high satisfaction rate. However, there were some limitations to the study. The sample size was relatively small, and the study was conducted at a single tertiary care centre in Central India. Therefore, the findings may not be generalizable to other populations or settings.

CONCLUSION

Present study was done in a tertiary care institute to determine the acceptability, safety and expulsion of PPIUCD. Out of total 220 women counselled; 93 women accepted PPIUCD. Despite the fact that most of the women attending labour room were having low levels of awareness, PPIUCD acceptance was relatively high. From our present study we can conclude that Post placental and Intra caesarean copper T insertion is safe, effective, long lasting with minimal complications and convenient method of long-term reversible contraception with low rates of expulsion. Government needs to develop strategies to increase public awareness of PPIUCD through different media sources and arrange training programmes in order to increase knowledge and skills among health care provider. Cash incentives to the acceptor, motivators and of course provider would bring about a substantial progress in PPIUCD use in developing countries like India. So, it can be concluded that PPIUCD is satisfactory post -partum family planning method. It is safe and reliable approach for spacing births and to meet unmet need of family planning.

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