

Study of acceptability for the use of postpartum intrauterine contraceptive device among women attending government general hospital, Guntur

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ABSTRACT

Background: Effective contraceptive methods are necessary to control the exploding population of India for its socioeconomic development. Postpartum intra uterine contraceptive device (PPIUCD) has a huge potential as an effective contraceptive method. The increased institutional deliveries provide women an easy access to immediate PPIUCD services. **Aim:** To study acceptability rate of postpartum intrauterine contraceptive device among women attending government general hospital, Guntur. **Materials and methods:** This was a prospective observational study conducted in the department of Obstetrics and Gynaecology, Government General Hospital, Guntur, for a period of 6 months between 1st October 2020 to 31st March 2021. Subjects were antenatal women more than 34 weeks gestational age and women in their immediate postpartum period. 300 subjects were counseled regarding PPIUCD. Using validated questionnaire including age, education, parity, awareness of PPIUCD, willingness or refusal and reasons for willingness or refusal of PPIUCD were collected and data recorded. Acceptability was defined as the number of women who agreed and got PPIUCD inserted. **Results:** Out of 300 subjects counseled only 96 accepted PPIUCD insertion. Acceptability rate was found to be 32%. Acceptance was more in booked subjects (44.44%) and in subjects with prior knowledge of PPIUCD (80%). Husband's refusal was the reason for refusal in 54.9%. **Conclusion:** Acceptability of PPIUCD was very poor in spite of PPIUCD being safe, effective and long acting with very few side effects. Proper counseling and awareness programs can increase acceptability of PPIUCD.

Keywords: Postpartum intrauterine contraceptive device (PPIUCD), acceptability, awareness, counseling.

India with population of 1.38 billion which is approximately 17.85% of world's population as of July 1, 2020 is the second most populous country in the world. With population growth rate of 1.2%, India predicted to have more than 1.53 billion by the end of 2030. This population explosion which hinders the development of our nation can be halted by providing effective contraceptive services to people.

Approximately 65% of women in first year postpartum have unmet need for family planning services in India.¹ 27% of births in India occurs in less than 24 months after previous

birth. Studies show that women who conceive within 24 months of previous birth face higher risk of complications like anemia, abortion, preterm labor, PROM, PPH, low birth weight babies and maternal mortality.

Intra uterine contraceptive devices have been used by women in India since decades for spacing pregnancy. Returning to health facility for family planning services after delivery is challenging to mothers in India who have competing demands. Provision of family planning services in immediate postpartum period overcomes multiple barriers.²

WHO medical eligibility criteria³ states that PPIUCD is

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safe in postpartum lactating mothers. CuT380 which is highly effective (>99%) with incidence of 0.6 to 0.8 pregnancies per hundred women in first year of usage is used as PPIUCD. CuT 380 is effective for 10 years. PPIUCD insertion has many advantages including convenience for postpartum women, saves time and additional visit to health facility. It is safe and service provider can be certain that woman is not pregnant at the time of insertion. Another advantage of PPIUCD is minimal risk of perforation because of thick wall of uterus.⁴ There is reduced perception of side effects like bleeding, cramping especially among lactating women since they are likely to experience amenorrhea. PPIUCD has an additive advantage that it has no effect on quantity or quality of breast milk. Most importantly woman has an effective method of contraception before discharge from hospital.

Materials and methods

Study Population - Antenatal women more than 34 weeks of gestational age attending antenatal OPD in GGH and women in immediate postpartum period.

Sampling technique - Non-probability convenience sampling technique.

Sample size: 300

Study design: Prospective observational study.

Study time: 1 October 2020 to 31 March 2021.

Study variables: Acceptability rate of PPIUCD, rejection rate, age, parity, education, awareness of PPIUCD.

Inclusion criteria: Antenatal women more than 34 weeks of gestational age attending antenatal OPD, GGH, Guntur, delivered women in their immediate postpartum period.

Exclusion criteria: Women with premature rupture of membranes more than 48 hours, prolonged labor, postpartum hemorrhage, women who delivered asphyxiated newborns.

Institutional ethics committee approval was taken.

Counseling: Subjects were counseled during antenatal visits, early labor, immediate postpartum. Validated questionnaire was used to collect data regarding age, parity, education, awareness of PPIUCD, reasons and persons motivating for acceptance of PPIUCD. In case of refusal of PPIUCD, persons motivating for refusal are noted and recorded. Women who refused PPIUCD were counseled regarding other method of contraception.

Procedure: Informed and written consent was taken from women.

Post placental insertion: In women who delivered vaginally, after active management of third stage of labor, bimanual examination was performed and it was assured that uterine cavity was empty and of appropriate tone. After

cleaning with antiseptic solution, posterior vaginal wall was retracted with Sim’s speculum and anterior lip of cervix held with ring forceps. IUCD was taken out of sterile package and grasped with Kelly’s forceps using no touch technique. Applying gentle traction on anterior lip of cervix using ring forceps, IUCD was inserted into lower uterine cavity. Then left hand was moved to woman’s abdomen and entire uterus was pushed superiorly. Kelly’s forceps was moved upwards gently towards uterine fundus. When fundus is reached, Kelly’s forceps was opened and IUCD was released at fundus. Then Kelly’s forceps was swept to side wall of uterus and slowly removed keeping it slightly open.⁵ The woman was made to rest on table for few minutes.

Intra caesarian insertion: IUCD was held between middle and index finger of right hand and passed through uterine incision. Once placed at fundus hand was slowly withdrawn. IUCD strings were guided towards cervix taking care not to include strings during uterine closure.⁵

Follow up: Women who were inserted PPIUCD were asked to come for follow up at 6 weeks or earlier in case of any complaint.

Statistical Analysis: Done using OpenEpi software.

Results

300 eligible subjects were counseled for PPIUCD insertion, out of which 96 accepted PPIUCD insertion and 204 rejected. Acceptability rate was 32%. Refusal rate was 68%.

Table 1: Acceptance and rejection according to demographic and obstetric history

Variables	Total	Accepted	Rejected
Age			
<20 Years	76(25.33%)	30(39.47%)	46 (60.52%)
20-29	204 (68%)	62 (30.39%)	142(69.6%)
30-39	20 (6.66%)	4 (20%)	16 (80%)
Education			
Illiterate	68(22.66%)	16(23.52%)	52(76.47%)
Till 10 th standard	120(40%)	28(23.3%)	92(76.66%)
Intermediate	96(32%)	40(41.66%)	56(58.33%)
Graduate	16(5.33%)	12(75%)	4(25%)
Parity			
1	176(58.66%)	72(40.9%)	104(59.09%)
2	92(30.66%)	20(21.73%)	72(78.26%)
3	24(8%)	4(16.66%)	20(83.33%)
>3	8(2.66%)	0(0%)	8(100%)

Among 300 subjects, 204(68%) were between 20 to 29 years. Out of them 62 (30.39%) accepted PPIUCD. Acceptability rate was only 20% in age group 30 to 39 years. 5.33% were educated up to graduation and acceptance was more in them which was 75%. Though 77.34% were literates, acceptability rate was only 34.48%. Acceptability rate was more in para -1 (40.9%) out of 176 para -1

counseled, 72 accepted. Acceptability rate was low in para-3 which was only 16.66% (table 1).

Table 2: Acceptance and rejection in relation to antenatal care and prior knowledge of PPIUCD

Variables	Total	Accepted	Rejected
Booked	180(60%)	80(44.44%)	100(55.55%)
Unbooked	120(40%)	16(13.33%)	104(86.66%)
Prior knowledge of PPIUCD	115(38.35%)	80(69.5%)	35(30.43%)
No prior knowledge of PPIUCD	185(61.66%)	16(8.67%)	169(91.35%)

Table 3: Reasons for acceptance of PPIUCD

Reasons	N= 96
Long acting	37(38.54%)
Reversibility	24(25%)
Safety	20(20.83%)
Non-interference with lactation	15(15.6%)

Out of 300 subjects, 180 were booked. Acceptance was more (44.44%) in booked subjects. In unbooked subjects, acceptance was only 13.33%. This was of significant association (p value <0.0001). 115 subjects (38.35%) had prior knowledge of PPIUCD, out of which 80 (69.5%) accepted PPIUCD insertion. Acceptability rate was more in women with prior knowledge of PPIUCD. This was of significant association. (p<0.0001) (table 2). Table 3 shows the reasons for acceptance of PPIUCD. 38.54% accepted as it was long acting. 25% accepted because of its reversibility.

Table 4: Persons motivating for PPIUCD insertion

Persons motivating	N = 96
Self	54(56.25%)
Husband	40(41.66%)
Mother in law	2(2.08%)

Table 4 shows persons motivating for acceptance of PPIUCD. 41.66% accepted PPIUCD by their husband's motivation. 56.25% accepted PPIUCD due to self-motivation.

Table 5: Reasons for refusing PPIUCD

Reasons	N = 204
Opting other methods of contraception	110(53.92%)
Fear of pain	48(23.52%)
Fear of heavy menstrual bleeding	20(9.8%)
Reason not specified	26(12.74%)

Table 5 shows reasons for refusing PPIUCD. 53.92% refused PPIUCD opting other methods of contraception. 23.52% refused due to fear of pain and 9.8 % due to fear of heavy menstrual bleeding.

Table 6: Persons motivating for refusal of PPIUCD

Persons	N = 204
Husband	112(54.9%)
Mother in Law	67(32.84%)
Self	25(12.25%)

Table 6 shows persons motivating for refusal of PPIUCD. Husband's refusal was the main reason for rejection in 54.9% and mother in law in 32.84%.

66.66% came for follow up at 6 weeks. 54.65% had no complaints at follow up visit. 15.62% had expulsion of PPIUCD. Except for minor complaints like pain, no major complications were reported.

Discussion

Population control and stabilization is necessary for socio economic development and welfare of nation. PPIUCD is a very effective family planning method especially in low reserve country like India. The present study was conducted to assess acceptability rate of PPIUCD. 300 participants were included in our study. In our present study, 32% accepted PPIUCD and 68% refused. Study by Vivek Kanhere et al ⁶, showed similar results. Higher acceptance was observed in primipara (40.9%) compared to multipara which was consistent with findings observed in study conducted by Ramya KS et al,⁷ the reason being multipara were more inclined towards permanent sterilization method.

Acceptance rate was more in women in age group less than 29 years; similar to findings observed in study by Bai Gujju et al ⁸. In our study acceptance was more in graduated subjects (75%) which stresses the importance of education. The study conducted by Sonali Deshpande et al,⁹ showed that education has positive effect on acceptance of PPIUCD.

Among booked subjects 44.44% accepted PPIUCD in our study probably because effective counseling in antenatal period cleared their misconceptions and increased acceptance of PPIUCD. Higher acceptance in booked subjects was seen in study of Gebremedhin Jnr et al¹⁰. Study by Gupta M et al¹¹ stressed the importance of antenatal counseling as a tool to increase acceptability of PPIUCD.

In our study, prior knowledge of PPIUCD was in 38.35% and acceptance was more in subjects with prior knowledge of PPIUCD which was 80%. Similar findings were observed in study done by Abinaya Valliappan et al.¹² Subjects with prior knowledge of PPIUCD were aware of its safety, long term usage and mild side effects which could be managed easily, so they were inclined towards accepting PPIUCD.

In 54.9%, husband's refusal were the main reasons for rejection of PPIUCD in our study. Priya et al¹³ found lack of involvement of husbands as the most common reason for low acceptance of PPIUCD in their study. A study by Sunuwar Subedi et al¹⁴ showed that husband's refusal was the main reason for rejection of PPIUCD. Study of Hema Diwakar et al¹⁵ also stressed the importance of involving husband and family members in counseling for increase in acceptance rate.

In our study 33.32% refused PPIUCD due to fear of pain, heavy menstrual bleeding which stresses the importance of

proper counseling and educating women regarding PPIUCD to alleviate their fears. A study done by Rupam Sinha et al¹⁶ showed that fear of side effects as major hurdle for PPIUCD acceptance.

66.66% came for follow up at 6 weeks in our study. Majority (54.65%) were comfortable with no complaints. 15.72% presented with expelled PPIUCD. Pain was present in 12.5%. Heavy menstrual bleeding was there in 9.37%, but after managing with medicines, subjects were satisfied.

Conclusion

PPIUCD is safe, effective and long acting spacing method. Despite of widely available PPIUCD services, acceptability rate is poor because of ignorance and inadequate knowledge. Increase in awareness of PPIUCD increases acceptability rate of PPIUCD. Reason for refusal like unwillingness of husband and fear of complications can be overcome by proper counseling, public awareness programs, and integration of PPIUCD counseling service at antenatal clinic with involvement of partner.

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