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Original Research Article

Effect of International Federation of Gynecology and Obstetrics- the Federation of Obstetric and Gynecological Societies of India Postpartum Intra Uterine Contraceptive Device initiative, India on postpartum contraceptive choices- last year and post-project one-year review in a rural medical college

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ABSTRACT

Background: The FIGO-FOGSI launched an initiative in 2015 to expand the use of PPIUCD in six centers in phase 1, including our institution. This study aimed at the evaluating the effect of this program on the postpartum contraceptive choices during the last year of the project and one year thereafter.

Methods: This was a clinical study conducted in the Department of Obstetrics and Gynecology, College of Medicine and J. N. M. Hospital, Kalyani, West Bengal, India from 1 January 2018 to 31 December 2019. All antenatal women were counseled about the various methods available for postpartum contraception. Data was collected on a monthly basis and results were analyzed.

Results: There was a marked reduction of the acceptance rate of PPIUCD after the withdrawal of the program, with mild variation of the user percentage of most other methods.

Conclusions: Further initiation and continuation of this FIGO-FOGSI project may definitely improve the scenario of acceptance of postpartum family-planning methods in this institution. However, in the existing situation, the capacity of available human resources should be built towards achieving this, to sustain the same impact as while on the FOGSI-FIGO project.

Keywords: Antara, Female sterilization, FIGO-FOGSI, India, Male condom, Postpartum contraception, PPIUCD, PPIUCD initiative

INTRODUCTION

Postpartum contraception or family-planning is an important and integral component of postpartum care. Pregnancies at short intervals increase risks of adverse maternal complications like unsafe abortions, anemia, antepartum- hemorrhage, postpartum-hemorrhage and infant outcomes like preterm births, low-birth weight and small for gestational age births and infant mortality and morbidity.^{1,2} Birth intervals less than 18 months have the highest mortality risk for infants and children under-five,

with decreasing risk as birth intervals increasing up to 36 months.³ The World health organization (WHO) recommends birth intervals of 2-3 years.² Postpartum family-planning is usually defined as the initiation of contraceptive methods within the first 12 months following delivery which help mothers to space their birth and thereby providing maternal and child health benefits.⁴⁻⁶ Birth intervals of at least 2 years can reduce maternal mortality by 30% and child mortality by 10%.⁷ The majority (91%) of postpartum women in developing countries express a desire to prevent pregnancy for at

least a year following childbirth; yet, use of contraceptives reported is low and risk of unintended pregnancy is high.⁸⁻¹² Even among women who use modern birth-spacing methods, use of highly effective, long-acting reversible contraception is low (<15%).¹³ Postpartum intra uterine contraceptive device (PPIUCD) initiative was jointly carried out in partnership of the International Federation of Gynecology and Obstetrics (FIGO)- The Federation of Obstetrics and Gynecological Societies of India (FOGSI) to build capacities of health care providers on family planning and counselling, improve access and availability of family planning services.

METHODS

This was an observational study conducted in the Department of Obstetrics and Gynecology, College of Medicine and J.N.M. Hospital, Kalyani, West Bengal, India from 1 January 2018 to 31 December 2019. The FIGO launched an initiative in April-May, 2015 to expand the use of postpartum IUCD in association with FOGSI in six selected centers in phase 1, including our institution. All antenatal care providers were trained using a standardized training learning resource package, and they, including the junior residents and nurses were encouraged to perform PPIUCD insertions. The existing family planning counsellors were strengthened by additionally providing separate counsellors in the antepartum OPD.

This study aimed at the evaluating the effect of this program on the preferences of postpartum contraceptive choices of the acceptors by comparing the distribution of postpartum contraceptive use during the last year of the project and one year after it ended. All women attending the antenatal clinic or emergency in early labor were counseled about the various methods available for postpartum contraception which included postpartum IUCD, injectable DMPA, male condom and lastly female sterilization.

PPIUCD (CuT 380A) was inserted in acceptors within 10 minutes of placental expulsion (post-placental insertion), intra-cesarean or 48 hours following delivery. Mothers with chorioamnionitis, puerperal sepsis, rupture of membranes >18 hours, distorted uterine cavity, unresolved postpartum hemorrhage were not eligible for insertion.

Injectable contraceptive medroxyprogesterone (DMPA-Antara) 150 mg was prescribed after 6 weeks postpartum. DMPA was contraindicated in postpartum women with severe renal impairment, active liver disease, active or past history of thromboembolic disorders.

Tubal sterilization was suggested for women who wanted a permanent method of contraception, completed family, free from active pelvic inflammatory disease or in whom

further pregnancy could represent significant obstetric and medical risks.

Barrier contraceptives or condoms were supplied in the postpartum unit in open boxes to be availed by users as required.

Data was collected on a monthly basis for two consecutive years for the total number of acceptors of the different available postpartum contraceptives and was entered in MS Excel 2013 with quantitative variables expressed as percentages. All statistical analyses were done using SPSS version 21 (IBM, Armonk, NY, USA) with T test.

RESULTS

The total number of deliveries in this institution from 1st January to 31st December 2018 was 7413 and that for the same period in 2019 was 7591.

Table 1: Acceptance of PPIUCD insertion in 2018.

Months 2018	No. of PPIUCD accepters	Total deliveries	Percentage
January	334	613	54.5
February	282	559	50.4
March	319	579	55.1
April	243	550	44.2
May	298	555	53.7
June	233	517	45.1
July	234	505	46.3
August	297	611	48.6
September	373	687	54.3
October	340	729	46.6
November	370	729	50.8
December	300	779	38.5
Total	3623	7413	48.9

Table 2: Acceptance of PPIUCD insertion in 2019.

Months 2019	No. of PPIUCD accepters	Total deliveries	Percentage
January	14	611	2.3
February	8	511	1.6
March	3	564	0.5
April	0	511	0
May	2	476	0.4
June	0	373	0
July	54	642	8.4
August	189	756	25
September	149	759	19.6
October	220	795	27.7
November	236	775	30.5
December	281	818	34.4
Total	1156	7591	15.2

There was a marked reduction in the acceptance rate of PPIUCD after the withdrawal of the program, as evident from Tables 1 and 2, from 48.9% to 15.3% ($p < 0.01$: significant).

Table 3: Acceptance of postpartum Antara in 2018.

Months 2018	No. of Antara accepters	Total deliveries	Percentage
January	0	613	0
February	0	559	0
March	0	579	0
April	5	550	0.9
May	3	555	0.5
June	2	517	0.4
July	6	505	1.2
August	2	611	0.3
September	0	687	0
October	0	729	0
November	0	729	0
December	0	779	0
Total	18	7413	0.2

Table 4: Acceptance of postpartum Antara in 2019.

Months 2019	No. of Antara accepters	Total deliveries	Percentage
January	0	611	0
February	2	511	0.4
March	1	564	0.2
April	1	511	0.2
May	1	476	0.2
June	1	373	0.3
July	2	642	0.3
August	1	756	0.2
September	3	759	0.4
October	2	795	0.3
November	0	775	0
December	1	818	0.1
Total	15	7591	0.2

Table 5: Acceptance of postpartum male condom use in 2018.

Months 2018	No. of condom accepters	Total deliveries	Percentage
January	43	613	7
February	41	559	7.3
March	45	579	7.8
April	18	550	3.3
May	40	555	7.2
June	12	517	2.3
July	20	505	3.9
August	15	611	2.5
September	12	687	1.7
October	12	729	1.6
November	13	729	1.8
December	14	779	1.8
Total	285	7413	3.8

Tables 3 and 4 show the average insertion percentages of postpartum injectable medroxyprogesterone remained almost the same in both years ($p = 0.7126$: not significant).

Table 6: Acceptance of postpartum male condom use in 2019.

Months 2019	No. of condom accepters	Total deliveries	Percentage
January	24	611	3.9
February	54	511	10.6
March	24	564	4.3
April	15	511	2.9
May	25	476	5.3
June	45	373	12.1
July	23	642	3.6
August	30	756	3.9
September	30	759	3.9
October	30	795	3.8
November	30	775	3.9
December	45	818	5.5
Total	375	7591	4.9

There was an increase of postpartum male condom use from 3.8% in 2018 to 4.9% in 2019 (Table 5 and 6) ($p = 0.16$: loosely significant).

Table 7: Acceptance of postpartum female sterilization in 2018.

Months 2018	No. of sterilization accepters	Total deliveries	Percentage
January	0	613	0
February	30	559	5.4
March	33	579	5.7
April	36	550	6.5
May	38	555	6.8
June	48	517	9.3
July	32	505	6.3
August	56	611	9.2
September	49	687	7.1
October	36	729	7.13
November	45	729	6.17
December	32	779	4.1
Total	435	7413	5.9

The acceptance of postpartum tubal ligation increased from 5.9% in 2018 (Table 7) to 8.2% in 2019 (Table 8) ($p = 0.0334$: significant).

While the number of deliveries in the institution were almost similar in 2018 and 2019, we found a mild rise in the postpartum tubal ligation, and uptake of condoms. However we saw an exponential and significant drop in the uptake of PPIUCD. This decline could be attributed to many factors; easing of the program mode intensity, reduced number of regular external monitoring, reduced level of motivation of the team members, decreased counselling limited to the pregnant women and most

importantly the withdrawal of additional counsellor provided by the program whose specific role was repeated counselling of the pregnant women, her mother-in-law and her husband.

Table 8: Acceptance of postpartum female sterilization in 2019.

Months 2019	No. of sterilization accepters	Total deliveries	Percentage
January	43	611	7
February	31	511	6.1
March	33	564	5.9
April	34	511	6.7
May	42	476	8.8
June	27	373	7.2
July	57	642	8.9
August	66	756	8.7
September	67	759	8.8
October	63	795	7.9
November	83	775	10.7
December	75	818	9.2
Total	435	7591	8.2

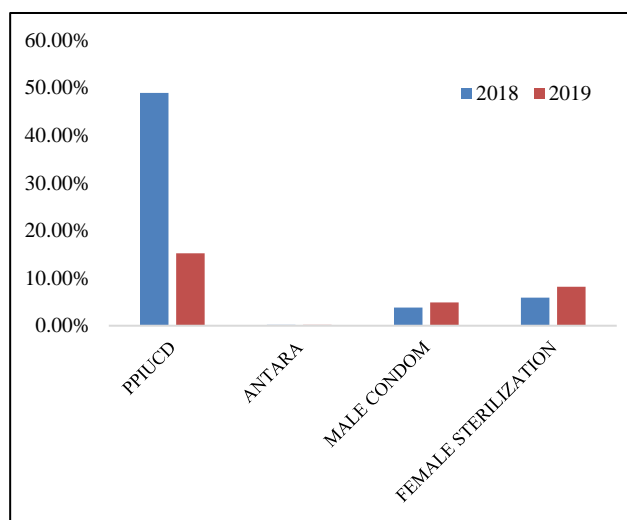


Figure 1: Postpartum contraception in 2018 and 2019.

DISCUSSION

In the developing countries, pregnancy and puerperium are probably the only opportunity for the health care providers to come in contact with healthy women of reproductive age. Puerperium, in particular, is when the women feel motivated and receptive for using family planning methods.

In our analysis, the acceptance rate of PPIUCD was considerably high in 2018 (48.9%) during the ongoing program mostly due to extensive counselling of the pregnant women, her mother-in-law and husband by all strata of antenatal caregivers. Videos on family-planning, general well-being, diet, breast-feeding, postnatal care, care of the newborn, displayed in antenatal OPD and

inpatient department added as a reinforcement while the women waited for their turn in the OPD.

The number significantly diminished in 2019 (15.2%) owing to lower intensity of program push, lack of monitoring, withdrawal of additional counselling support, sheer workload leading to overall reduction in quantity and quality of counselling. However after a drop in the first six months of 2019, the numbers started to pick up as the senior hospital team revived the program implementation. Kanhere et al found 36% of PPIUCD insertion rate while according to Kharkwal study it was 60%.^{14,15} In a study conducted in North India, the overall acceptance rate among eligible mothers was 39% whereas the acceptance level was presumed to be 17% in Uganda.^{16,17}

For Antara, the percentage of postpartum users was low and almost similar in the consecutive years. Jonathan and Abubakar found acceptance as high as 29.8%.¹⁸ According to Eliason et al, the use of injectable contraceptives in postnatal mothers was 30.3%.¹⁹ Therefore the PPIUCD initiative did not have significant impact on the increased use of injectable contraceptives post-delivery.

Male condom use varied from 3.8% in 2018 to 4.9% in 2019. Eliason study established much higher user percentage of 33.8%.¹⁹ An important benefit of barrier method is it does not affect lactation. However, appropriate counselling regarding correct use and their relative higher failure rate, even with proper use, is to be provided to willing mothers prior to usage.^{20,21}

Female sterilization is the second most common method of contraception used by women in the United States, approximately half of which are performed in the immediate postpartum period, following nearly 10% of total births.²² The procedure is much convenient for the mother as she is already present in the hospital for delivery. Gunasingh et al found 38.5% postpartum sterilization among 231 mothers with 2 or more living children.²³ In our study, there was a rise in the number of postpartum ligations from 5.9% in 2018 to 8.2% in 2019.

In one research conducted in China, the acceptance rate of postpartum contraception was 97.6% which included depot medroxyprogesterone acetate (38.4%); tubectomy (19.9%); male condom (7.7%); intrauterine device (0.5%).²⁴ Another analysis in North India derived the user rate of 37.2% for IUCD, 27.6% for injectable DMPA and 17.4% for male barrier contraceptive in mothers in puerperium.²⁵

Limitations

The limitations of our study were: The sample size was small; the entire project duration was not included in the study; all possible methods of post-partum family planning were not available in our institution; and the low

socio-economic and educational status, lack of family support and poor compliance of the antenatal women hindered the acceptance of postnatal family-planning methods.

CONCLUSION

Postpartum family planning, therefore, is not only essential for ensuring the health of the mothers and their new-borns but also plays an indispensable role in stabilizing population growth. The objective of the FIGO-FOGSI PPIUCD project was to institutionalize the PPIUCD services provision into routine maternal care and provide the mothers with the attractive option of a long-acting reversible contraception. The impact of this project was quite evident with the increased acceptance of PPIUCD, thereby increased use of postpartum contraception, during the program period. Thus, it can be concluded further initiation and continuation of this FIGO-FOGSI project may definitely improve the scenario of acceptance of postpartum family-planning methods in this institution in future. Proper communication and counselling will enhance the uptake of PPIUCD as a method of contraception. However, the capacity of available human resources in the existing situation should be built towards achieving this, to sustain the same impact as while on the FOGSI-FIGO project.

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Conflict of interest: None declared

Ethical approval: PPIUCD program was implemented as per the approved guidelines "IUCD reference manual for medical officers and nursing personnel"- September 2013 issued by the Government of India- Family Planning Division, Ministry of Health and Family Welfare. In our institution, Ethics Committee approval was obtained

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