



A PROSPECTIVE STUDY ON THE PREFERRED TEMPORARY METHOD OF CONTRACEPTION AMONG POSTNATAL MOTHERS IN A TERTIARY CARE CENTRE

Obstetrics & Gynaecology

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ABSTRACT

Background: The postpartum period is critical for a woman's healing and recovery after childbirth, hence spacing between pregnancies is essential. Postpartum family planning prevents unexpected pregnancies, allows for adequate birth spacing, and reduces maternal morbidity and death. During the postpartum phase, the Postpartum Intrauterine Contraceptive Device (PPIUCD) and Injectable Depot Medroxyprogesterone Acetate (DMPA) are two frequently advised long-acting reversible contraceptive techniques. **Objective:** The purpose of this study was to compare the acceptance and reasons for noncompliance with DMPA and PPIUCD among postnatal mothers in South India. **Methods:** This observational study was conducted at the Department of Obstetrics and Gynaecology, Sri Muthukumaran Medical College and Research Institute, for a period of 6 months. Total of 146 postnatal mothers were surveyed using a validated questionnaire to gather data on contraceptive preference and the factors influencing their choices. **Results:** The majority of participants (39.7%) were between the ages of 25 and 29, with 47.9% of them in their second pregnancy. According to the study, 23.3% of mothers chose no contraception, 8.2% picked Copper-T, 31.5% chose sterilization, and 37% favoured DMPA. Contraceptive choices were substantially correlated with factors including planning for permanent sterilization, male partner or family refusal, and perceived worries regarding IUCD consequences ($p < 0.05$). Notably, lack of awareness had no substantial effect on contraceptive decisions. **Conclusion:** Among postpartum mothers, DMPA was the most widely used method of birth control, followed by sterilization. This results highlight the value of individualized counselling to dispel myths and encourage wise contraceptive decisions in the postpartum phase.

KEYWORDS

DMPA, PPIUCD, Postpartum, Postnatal Contraception, Reversible Contraception

INTRODUCTION:

Family planning is crucial to public health, especially in the postpartum phase. Effective contraceptive methods reduce maternal and infant morbidity and mortality by regulating reproduction, improving acceptable child rearing habits, assisting mothers in regaining their strength, and promoting optimal spacing between children. Two frequently suggested long-term options include injectable depot medroxyprogesterone acetate (DMPA), a hormonal contraceptive given every three months, and postpartum intrauterine contraceptive devices (PPIUCD), a non-hormonal device placed right after delivery.¹

A major public health issue in India is the unmet demand for family planning, which leads to unwanted births, maternal and infant mortality, and socioeconomic hardship on both the family and community.² About 9.4% of married women in India, including those who want to space or limit births but do not use any form of contraception, have an unmet need for family planning, according to the National Family Health Survey (NFHS-5).³ The health system is greatly impacted by this unmet need, which raises the prevalence of high-risk pregnancies and abortions.⁴

Both postpartum intrauterine contraceptive devices (PPIUCD) and injectable depot medroxyprogesterone acetate (DMPA) are long-acting, reversible methods of birth control that have unique benefits and drawbacks, especially during the postpartum phase. When used properly, DMPA, a hormonal contraception that is injected every three months, has a failure rate of less than 1% and is convenient and highly effective.⁵

The mechanism of action is to block ovulation, thicken cervical mucus, and thin the endometrium, making it extremely efficient for women who do not want to employ daily or coital-dependent treatments.⁶ Given that DMPA has been linked to adverse effects like weight gain, irregular menstruation, and a delayed return to fertility after stopping, its use may be discouraged, especially for women who intend to become pregnant soon after stopping.⁷

A non-hormonal option that provides instant contraceptive protection

is the post-partum intrauterine contraceptive device (PPIUCD), which is usually implanted 48 hours after delivery. It works primarily by stopping sperm from fertilizing the egg, and it lasts for up to ten years, which makes it a great option for women who want long-term contraception.⁸

Breastfeeding women can use the PPIUCD because it has no effect on lactation, unlike DMPA. Despite data demonstrating PPIUCD's safety and minimal complication rates, acceptance of the procedure is frequently hampered by concerns about discomfort, infection, or device expulsion.⁹ Although all of these approaches work, the decision between DMPA and PPIUCD frequently comes down to personal preferences, medical background, and availability of healthcare facilities.

In order to better understand postpartum contraceptive behaviour and guide measures to increase uptake of these techniques, this study intends to investigate the factors influencing postnatal mothers' acceptance of DMPA and PPIUCD in South India. Healthcare professionals may boost acceptance and guarantee that more women receive the benefits of effective postpartum contraception by addressing cultural and educational hurdles.

Aims and Objectives:

To compare the acceptance and reasons for non-compliance between Injection DMPA and Postpartum IUCD.

Methodology:

This observational study was conducted by the Department of Obstetrics and Gynaecology, at Sri Muthukumaran Medical College and Research Institute for a period of 6 months, among postnatal mothers in Postnatal ward. In a total of 146 mothers' response were recorded using a pretested validated questionnaire including the preference of type of contraception and factors influencing the reference were recorded. Data were collected and compiled in MS Excel software and appropriate descriptive analysis was done using SPSS Version 17.0.

RESULTS

The study included participants from various demographic and reproductive health categories. According to the age distribution, individuals who were 25 to 29 years old made up the largest group (39.7%), followed by those who were 19 to 24 years old (26.0%), 30 to 34 years old (24.7%), and 35 to 39 years old (9.6%). In terms of gravida status, 16.4% of participants had more than two pregnancies, 47.9% were in their second pregnancy, and 35.6% were in their first pregnancy (primigravida). Of those who had given birth, 52.1% had done it once, 42.5% had not, 4.1% had done so twice, and 1.4% had done so three times. 43.8% of participants had no live births, 50.7% had one live birth, 4.1% had two live births, and 1.4% had three live births, according to live birth records. Table 1 shows that 79.5% of the individuals had no history of abortion, 17.8% had one abortion, and 2.7% had two abortions.

Table 1: Distribution of Demographic variables in the study group:

Categories	Variables	Frequency	Percent
Age Category	19 – 24 Yrs	38	26.0
	25 - 29 Yrs	58	39.7
	30 – 34 Yrs	36	24.7
	35 – 39 Yrs	14	9.6
Gravida	Primi	52	35.6
	Second	70	47.9
	More than 2nd	24	16.4
Para	0	62	42.5
	1	76	52.1
	2	6	4.1
	3	2	1.4
Live	0	64	43.8
	1	74	50.7
	2	6	4.1
	3	2	1.4
Abortion	0	116	79.5
	1	26	17.8
	2	4	2.7
Choice of contraception	Copper-T	12	8.2
	DMPA	54	37.0
	Sterilization	46	31.5
	None	34	23.3

As seen in Figure 1, 31.5 % of participants were motivated by plans for permanent sterilization, and 45.2% were impacted by the availability of alternative contemporary methods of birth control.

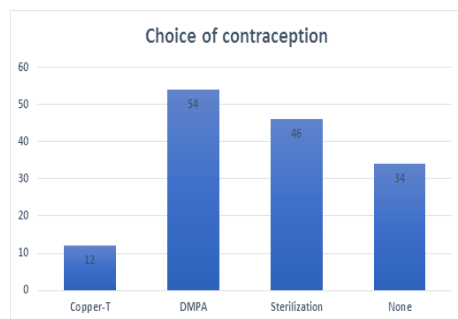


Figure 1: Distribution of Contraception preference among study group

A thorough examination of the variables affecting the choice of contraception showed statistically significant variations. The choices of contraceptives (Copper-T, DMPA, Sterilization, None) did not significantly differ in terms of lack of knowledge about contraception. DMPA users were more likely to have perceived worries and anxieties of IUCD-related problems ($p < 0.01$). The decision to use DMPA over alternative approaches was significantly impacted by the reluctance of male partners and family ($p < 0.05$). There were no discernible differences between the groups in terms of religious views or fear of diminished sexual pleasure. Certain contraceptive options were substantially correlated with anxiety of feeling a foreign body and planning for permanent sterilization ($p < 0.01$). Choices of contraception were also considerably impacted by the availability of other contemporary contraceptive methods ($p < 0.05$). (table 2)

Table 2: Choice of contraception and factors influencing

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Factors		Yes	No	Total	p-value
Lack of awareness about contraception	Copper-T	0	12	12	>0.05
	DMPA	0	54	54	
	Sterilization	2	44	46	
	None	0	34	34	
Perceived concern and fears of complications related to IUCD	Copper-T	0	12	12	<0.01
	DMPA	24	30	54	
	Sterilization	2	44	46	
	None	8	26	34	
Male partners and family's refusal	Copper-T	0	12	12	<0.05
	DMPA	20	34	54	
	Sterilization	0	46	46	
	None	0	34	34	
Religious beliefs	Copper-T	0	12	12	>0.05
	DMPA	0	54	54	
	Sterilization	0	46	46	
	None	4	30	34	
Do not want to have foreign body	Copper-T	0	12	12	<0.01
	DMPA	18	36	54	
	Sterilization	0	46	46	
	None	4	30	34	
No need because husband/ Partner is away	Copper-T	0	12	12	<0.05
	DMPA	0	54	54	
	Sterilization	0	46	46	
	None	6	28	34	
Fear of decreased sexual pleasure	Copper-T	0	12	12	>0.05
	DMPA	4	50	54	
	Sterilization	0	46	46	
Unpleasant experience of friends/ family member during IUCD insertion	Copper-T	0	12	12	<0.01
	DMPA	20	34	54	
	Sterilization	2	44	46	
	None	6	28	34	
Planning for permanent sterilisation	Copper-T	0	12	12	<0.01
	DMPA	2	52	54	
	Sterilization	36	10	46	
	None	10	24	34	
Availability of other modern contraceptive devices	Copper-T	0	12	12	<0.05
	DMPA	0	54	54	
	Sterilization	0	46	46	
	None	2	32	34	

DISCUSSION:

We found a broader age range (19–39 years) in our study, with the largest group being 25–29 years old (39.7%). On the other hand, Kamalika Das et al. state that "the majority of them were from the age group of 21-25 years, with 22 (55%) and 20 (50%) in the PPIUCD and DMPA group, respectively." ¹⁰ Differences in contraceptive methods may result from this disparity in age focus between studies.

In our study we have observed the various social factors influencing the acceptance of contraception, including partner/family refusal (13.7%) and planning for permanent sterilization (32.9%). Najan et al ¹¹ observed that the main reasons for refusal were a preference for tubal ligation and fear of side effects, which is similar to our findings. Kamalika das et al. ¹⁰ have also observed that the discontinuation rate was 7.5% in PPIUCD users as compared to 5% in inj. DMPA users in second follow up, suggesting relatively similar retention rates for both methods.

According to our survey, DMPA was the most often selected option (37.0%), followed by sterilization (31.5%), whereas Copper-T (IUCD) was less frequently selected (8.2%). PPIUCD acceptability is higher (68%) in the vaginal birth group (group A) than in the caesarean birth group (group B), according to Dhameliya et al. ¹² This implies that the route of delivery affects the choice of contraception, an issue that our study did not examine. In contrast to our findings, Burman et al. ¹³ found that 87.3% of research participants selected DMPA and 63.6% favoured PPIUCD.

55 postpartum women were randomly chosen from each group utilizing either DMPA or PPIUCD in Burman et al.'s longitudinal cohort research. They found that DMPA had a higher overall acceptance rate (87.3%) than PPIUCD (63.6%). Among women ages 21 to 25, acceptance of both approaches was noticeably higher. While

DMPA acceptance was comparable for women with one or two children, women with one kid preferred PPIUCD. The main cause of discontinuation for both groups was irregular bleeding, with a greater number of PPIUCD users (36.4%) quitting than DMPA users (12.7%).¹⁰

With regards to counselling on postpartum contraception which plays a pivotal role in restoring health of the mother, Najan et al. recruited 220 women and split them into two groups: 110 women in Group A received focused postpartum family planning (PPFP) counselling, whereas 110 women in Group B received standard counselling. PPIUCD acceptability was higher in the focused group (22%) than in the routine group (9%), and IUCD willingness was higher in the focused counselling group (68%) than in the routine group (58%). Fear of adverse effects and a preference for tubal ligation were the primary causes of refusal.¹¹ In our study only standard counselling was given which may have a drawback with regards to reduced choice of IUCD.

In our study we found significant correlation between social beliefs, husband rejection, fears of complications related to IUCD, religious beliefs, fear of foreign body in uterus, fear of decreased sexual pleasure and rejection of IUCD over DMPA. Participants in the Budharani cross-sectional study were chosen in a methodical manner. According to the survey, 12.7% of women agreed to use PPIUCD right away. Their husbands' rejection (17.7%), prior bad experiences (10%), and worries about problems (24.8%) were the main causes of non-acceptance. PPIUCD was more likely to be accepted by women who had completed secondary school and who had gone to four or more prenatal care appointments.¹⁴

Summary and Conclusion:

The demographics, reproductive health, and contraceptive choices of the subjects were investigated in our study. The majority of participants were between the ages of 25 and 29, with most in their second pregnancy. Fewer people chose Copper-T or no contraception, while DMPA and sterilization were the most popular methods. Male partners' and families' reluctance, perceived worries about IUCD consequences, and plans for permanent sterilization were important influencing factors that were significantly correlated with particular contraceptive choices. These results highlight the necessity of specialized counselling and education to address these issues and obstacles.

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