

A STUDY ON ACCEPTANCE/PRACTICE OF POST-PARTUM CONTRACEPTION- DMPA(ANTRA) VS POST-PARTUM INTRA UTERINE CONTRACEPTIVE DEVICE AT A DISTRICT HOSPITAL IN UTTAR PRADESH

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Abstract

Background: Depot Medroxyprogesterone acetate (DMPA) and Intra Uterine contraceptive device(IUCD) both are long acting and reversible contraceptives with distinct mechanisms. The selection of contraceptive method depends on individual preferences, health considerations and lifestyle. DMPA being a non-invasive hormonal method and IUCD being an invasive, non-hormonal one, DMPA works by suppressing ovulation and thickening of cervical mucus while IUCD prevents fertilisation by creating a hostile uterine environment. These differences allow for tailored choices in family planning based on a person's need and circumstances. **Aim:** To compare the acceptance between both these methods of contraception in a district hospital. **Materials and Methods:** An observational study was done in which a sample size of 100 postpartum females were taken who opted for either IUCD or DMPA. Data from the questionnaire were entered in Microsoft Office Excel and transferred to IBM SPSS software version 4, Pearson's chi square test used for variable & P- value were calculated. P-Value <0.05 was considered significant. **Result:** The acceptance rate for PPIUCD was 64 % and the acceptance rate for DMPA was 36%. It was seen that the acceptance of PPIUCD was significantly higher than that of DMPA in respect to age group and parity, significantly higher in age group 21-25 years. The low rates of DMPA was unawareness of its benefits. Better awareness to be created among the population about the methods of contraception for better acceptance of contraceptive measures among the population. **Conclusion:** The acceptance of PPIUCD is more as a method of contraception than DMPA in post-partum women delivering at a District Hospital in Uttar Pradesh.

INTRODUCTION

Planning, providing and using contraception is called family planning.^[1] It is a very basic human right for the welfare of individuals, families and society as a whole. Birth control methods have been used since long, but only the effective and safe methods became available in the 20th century.^[2] Safe and effective use of contraception is the need of the day. India is the most populous country in the world, representing 17.76% of the world's population.^[3] India was the first country in the world to implement

family planning as early as 1952 with the aim of controlling it! a population that has already reached 1.42 billion. With respect to a high ten-year growth rate of 18.56.

Family planning can avert more than 30% maternal deaths and 10% child deaths, by spacing between pregnancies. In India, 65% females in the first year after giving birth have a need for family planning.^[4] Intrauterine contraceptive devices (IUCDs) provide highly effective, cheap, safe, long-term but reversible protection against pregnancy. It is safe to use for many years (for 10 years for Cu IUCD 380A, 5 years for Cu IUCD 375). Postpartum breastfeeding females can also use IUCD safely as it does not interfere with breastfeeding. A postpartum IUCD can be inserted immediately after a vaginal birth, during caesarean section and within 48 hours after delivery, before women are discharged from health facilities.^[5] Depot medroxyprogesterone acetate (DMPA) is a hormone contraceptive with a high satisfaction rate as provided by an injection every three months, which can be

given outside the clinical facilities. It is also a low-cost and highly effective method with a long-lasting effect. It is also a reversible method and female's chances of getting pregnant after stopping its use do not differ from those who have not used DMPA.^[6]The importance of this study is the comparison of the acceptance of two such contraceptives with similar properties but a different mechanism, administration and action. While DMPA is non-invasive, hormonal. The IUCD is invasive, non-hormonal. The primary objective of this study was to compare acceptability between the two contraceptives in relation to variables such as age, parity.

MATERIALS AND METHODS

An observational study was conducted in the Department of Obstetrics and Gynaecology at a District Hospital in Uttar Pradesh, India, over a period of 03 months from 1 October 2023 to 31 December 2023. Institutional Ethical committee approval and informed consents of the candidates were obtained.

Inclusion and Exclusion Criteria

Eligibility criteria included postpartum females using either of the two methods of contraception, DMPA or PPIUCD for a method of contraception.

Sample size calculation criteria: Sample size has been calculated by the formula based on the acceptance rates of two contraceptives- PPIUCD[64%] and DMPA[36%]. Based on formula, a minimum of 76 postpartum females who were/will be using either DMPA or PPIUCD were calculated. In this study, total of 100 postpartum females who fulfilled the eligibility criteria and consented to participate in this study. Data was collected through interview of eligible females in the OPD/IPD. The questionnaire included the candidate's details like age and parity whether wanting to continue or decline and reasons behind that. Candidates were asked for follow-up every month and will be reviewed with another separate questionnaire, whether they want to continue or decline the current method of contraception.

Statistical Analysis

Data from the questionnaires were entered in Microsoft Office Excel 2007 and Master Charts were prepared. Results were presented in tables. Data from

the tables were transferred to IBM Statistical Package for the Social Sciences, version 20.0(SPSS Inc., Chicago, IL, USA). Pearson's Chi-square test was used for variables and p-values were calculated to find out the statistical significance of the variables. The p-value <0.05 was considered statistically significant.

RESULTS

The acceptance rate for PPIUCD was 64 % and the acceptance rate for DMPA was 36%. It was seen that the acceptance of PPIUCD was significantly higher than that of DMPA. [Table/Figure 1]

In [Table/Figure 2], it was found that acceptance of PPIUCD in female of age group 21-25 years was significantly higher than females of other age groups. Females of age greater than 30 years were reluctant to continue PPIUCD even after counselling, majorly because of either pressure from family or were willing to shift to permanent methods of contraception. However, females of age group 31 to 35 years after proper counselling and ensuring constant availability & no cost of the injections of DMPA.

In [Table/Figure 3], it was seen that primiparous females wanted to continue with their previous methods i.e. IUCD more than females with two or more children.

However, they were ensured that PPIUCD would be removed when they want conceive again (minimum three years). Females with three or more children were interested in permanent methods of contraception. It was seen that women with one and two children accepted the PPIUCD in this study, with low level of acceptance among females having three or more children.

In [Table/Figure 4], it was seen that educational status did not seem to have much influence on the acceptance of either PPIUCD or DMPA in this study. [Table/Figure 5] shows, most common cause of decline of PPIUCD was menstrual disturbances, followed by pain abdomen and missing thread. In case of DMPA, females refused to continue with the injection, only reason for refusal being menstrual disturbances.

Table 1: Comparison of overall acceptance and decline rate between PPIUCD and DMPA users

Contraception	Acceptance	Percentage
PPIUCD	64	64
DMPA	36	36

Table 2: Comparison of acceptance between PPIUCD and DMPA users with respect to different age groups

Age (years)	PPIUCD	DMPA
<20	20	10
21-25	30	18
26-30	12	2
31-35	10	2
>36	4	2

Table 3: Comparison of acceptance between PPIUCD and DMPA users with respect to parity

Parity	PPIUCD	DMPA
1	20	21
2	23	12
>3	5	2

Table 4: Comparison of acceptance between PPIUCD and DMPA users with respect to educational status

Education	PPIUCD acceptance	DMPA acceptance
Illiterate	2(4.2%)	4(11.4%)
1-5 grade	19(39.6%)	11(31.4%)
6-8 grade	15(31.2%)	8(22.9%)
9-12 grade	10(20.8%)	10(28.6%)
Graduate	2(4.2%)	2(5.7%)

Table 5: Comparison of reasons for decline between PPIUCD and DMPA users

Reason for decline	PPIUCD(number of candidates=10)	DMPA(number of candidates=30)
Pain abdomen	2	-
Irregular bleeding or spotting	5	17
Wanted permanent method	3	3
Amenorrhoea	-	10

DISCUSSION

In this study, the total acceptance of PPIUCD was found to be significantly more than that of DMPA. About 64 out of 100 females chose PPIUCD (acceptance rate-64%), whereas 36 out of 100 females have chosen DMPA (acceptance rate- 36%). Hazi Kazemi E et al., showed the continuation rate after six months for DMPA was 39%.^[9]

In relation to different age groups, the acceptance of both PPIUCD and DMPA were found to be significantly higher in age group between 21 to 25 years. Similar results were found in a study by Kanhere AV et al., on PPIUCD and by Fonseca M et al., on DMPA. Acceptances were found to be low in elderly females as they were more inclined to accepting permanent methods of contraception.^[8,10]

In regards to parity, the acceptance of both methods was found to be significantly higher in females who had one or two children. Study done by Safwat A et al., in Egypt where 30% of primiparous mother accepted the use of PPIUCD compared to 15% of multipara.^[11] In the study by Fonseca M et al., most of the females (44%) accepted DMPA who had 2 or more children.^[10]

Educational status of females plays an important role in the acceptance of any contraception. In this study, it was found that 60-70% of study population were below 10th standard. Goswami G et al., found the acceptance of PPIUCD was 23% in those with primary schooling, 49% in those with secondary schooling and 13% among illiterates.^[12] In this study, 10 out of 100 women (10%) using PPIUCD declined the method. Most common reason for decline was found to be irregular bleeding in the past. Similar observation was by Mishra S, where bleeding (32.56%) also was the most common reason for removal.^[13] One important reason for refusal or decline of PPIUCD was found in this study was pressure from the family. This was also seen in a study by Goswami G et al., where the significant reason for IUCD removal was pressure from husband and other family members.^[12] In case of DMPA, 30

out of 100 females (30%) in this study declined the injection, the main reason being was irregular bleeding & amenorrhea in past. Similar results were found in a study by Nautiyal R et al., where menstrual disturbances were the main reason for discontinuation of DMPA.^[14] Counselling is an essential tool to increase awareness about newer contraceptive measures.^[15]

Limitations

The study population was small and the study duration was short. Long term follow-up was not done (done for only 3 months). Acceptance was compared in respect to age & parity. Hence, the result of the study might indicate the actual scenarios among the entire population.

CONCLUSION

The acceptance of both PPIUCD and DMPA was found to be significantly higher in women of age group 21-25 and with one or two children. However, despite both the methods having certain side-effects, the acceptance of PPIUCD was found to be more than that of DMPA at a District Hospital in Uttar Pradesh. Government and health care facilities need to develop strategies to increase public awareness of DMPA and PPIUCD through different media sources and all misinformation should be removed.

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