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Acceptability and compliance of DMPA among rural women in Sitapur UP

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Abstract
Introduction: Uncontrolled population growth in India is recognized as the single most hurdle for the nation's development. Population can only be controlled by effective and compliant methods of contraception. One such method is long acting injectable medroxy progesterone acetate (DMPA) that simplifies compliance.
Aims and Objectives: To assess the acceptability and compliance of injection DMPA in rural married women in Sitapur.
Methods: The present study was conducted on 150 married women aged 18-45 years who had chosen DMPA as contraceptive at HIMS Sitapur in duration of 2 years. DMPA injection was given within 7days of menstruation, within 7 days post-abortion and after 6 weeks postpartum. Subsequent injections were given at three monthly intervals. All women were followed up for one year after the first injection for pregnancy rate, side-effects, discontinuation and patient satisfaction.
Results: It was observed that out of 150 women 72.66% were from age group of 21-30 years and 41.33 % were primipara. Most common side effect was irregular bleeding 58% followed by amenorrhea in 20%. Discontinuation rate was 73.33% after first injection and 18% after second injection. 56% had stopped injection due to side effect 16.66 % women had changed contraception.10% women had planned pregnancy and17.33% women had lost to follow up.
Conclusion: Acceptability is very good in rural women because of convenience of dosing, coital independence and privacy. Compliance is low due to side effect but can be increased with counseling and diligent follow up.

Keywords: acceptability, compliance, contraceptive, counseling, DMPA

Introduction
India shares one sixth of the total burden of the global population of around 7.6 billion. High fertility rate, high maternal mortality and high infant mortality rates are the shared problems of the all the developing countries of the world [1]. Population can only be controlled by effective and compliant methods of contraception. Birth spacing not only reduces the fertility but also improves the health of the mother. The high rate of unintended pregnancies and the relative failure rates with the typical use of reversible methods of contraception are strong indicators of the need for a long acting contraceptive method that simplifies compliance. One such method is injectable Medroxy Progesterone Acetate (DMPA) which is a long acting agent that has been part of the contraceptive programs of many countries for more than 20 years [2]. Depot Medroxy Progesterone Acetate or DMPA is a 3-monthly intramuscular injectable that delivers 150 mg of medroxy progesterone acetate in microcrystalline suspension form. It provides long acting, effective and reversible contraception. It acts by inhibition of ovulation by suppressing mid cycle LH peak, thickens the cervical mucous and the endometrium becomes atrophic preventing blastocyst implantation. DMPA is the preferred method of contraception in those women who are not willing for daily pills or intrauterine contraceptive devices and lactating mothers. Typical failure rate of DMPA is. 3/100 women years which is comparable with OCP's, IUCD and surgical sterilization [3].

Aims and Objectives
To evaluate the acceptability and compliance of injection DMPA in rural married women in Sitapur.

Material and Methods

The study was conducted at the Department of Obstetrics and Gynecology, Hind Institute of Medical Sciences, Sitapur in married women aged between 18-45 years who were in need of contraception in the interval period or post abortal or post partum women. The women were informed about all the available methods of contraception and explained in detail about the benefits and side_effects of each contraceptive method. Those who opted for the DMPA injection were included in this study.

Exclusion criteria

Breast feeding- less than 6 weeks
Unexplained vaginal bleeding or suspected malignancy
Severe liver disease
Severe hypertension
Breast cancer
Coagulation disorders

A total of 150 women were included in the study over a period of two years. After taking an informed consent a detailed history was taken and physical and gynecological examination was done. DMPA injection was given deep intramuscular in the first week of menses in the interval period or within 7 days post abortal or after 6 weeks of post partum. All women were given a appointment card for their next scheduled injection. Subsequent injections were given at three monthly intervals. All women were advised to keep a menstrual diary and report immediately in case of any complaints. All women were followed for one year after the first injection. During each visit the following parameters were assessed.

1- Alteration in their menstrual pattern or amenorrhea.
2- Weight and blood pressure.
3- Any other side effect related to progesterone e.g. headache, backache, bloating, depression.
4- Reason noted if the patient wanted to discontinue injections.

Results

All the data collected was evaluated and analyzed statistically.

Table 1: Age distribution

Age	Number	Percentage
18 to 20	9	6
21-30	109	72.66
31-40	30	20
.40	2	1.33

Table 1: 109 (72.66 %) women were from the age group of 21-30 yrs. 30 (20%) women from age 31-40.9 (6%) women were between 18-20 years.

Table 2: Parity wise distribution

Parity	Number	%
0	2	1.33
1	62	41.13
2	51	34
3	30	20
>=4	5	3.33

Table 2: 62 (41.13%) women had one child. 81 (54%) women had two or three children. Five (3.33%) women had 4 or more than 4 children but chose DMPA as they are not willing for tubal ligation due to religious issues.

Table 3: Time of start of injection

Time of start of injection	Number	%
Postabortal	10	6.66
Posrtpartum	90	60
Interval	50	33.33

Table 3: 90 (60%) women had started in the postpartum period. 50 (33.33%) women had started in interval period. 10 (33.33%) had started in the post abortal period

Table 4: Side effects

Side effects	Number	%
Irregular bleeding	87	58
Amenorrhea	30	20
Scanty period	15	10
Headache	5	3.33
Backache	5	3.33
Weight gain	4	2.66
Hypertension	2	1.33

Table 4: Most common side effect was irregular bleeding in 87 (58%) women followed by amenorrhea in 30 (20%) women and scanty menses in 15 (10%) women. Other symptom like headache, backache, weight gain and hypertension were found in less than 5% women.

Table 5: Discontinuation Rate

Follow up time	No of women discontinued	%
After 1st injection	110	73.33
After 2nd injection	25	16.66
After 3rd injection	10	6.67
After 4th injection	5	3.33

Table 5: 110 (73.33%) women did not take the injection after the first dose. In the remaining 40 women 25 (16.66%) women did not continue after the 2nd injection. 10 (6.67%) women had left after 3rd dose. Only five women had competed all the four doses in one year.

Table 6: Reason for Attrition

Reason	Number	%
Side effect	84	56.6%
Planned pregnancy	15	10%
Changed contraception	25	16.66
Lost to follow up	26	17.33%

Table 6: Most common reason for discontinuation in 84 (56.66%) women were the side effects. 25 (16.66%) women had changed contraception. 15 (10%) had planned pregnancy. 26 (17.33%) were lost to follow up.

Discussion

DMPA is a very effective and acceptable contraceptive. In this study no failure of DMPA injection was seen as no pregnancy has occurred after use of DMPA injection in study period. However in spite of its convenient 3 monthly dosing schedule compliance was not good as 110 (73.33%) women discontinued it after the 1st injection. Similar drop out is seen in study of Fonsea *et al* (2017) [4] and Aktun H *et al* (2005) [5]. In Nair *et al* (2007) [6] discontinuation rate was 43%. In our study only 5(3.33%) women has completed 12 month follow up which is lower than study of Sirisha P *et al* (2017) [7] in which 36%women completed 12 month follow up. Higher

discontinuation rate may be due to various factors like side effects, socio cultural factors, family myth like irreversibility of injection or women coming from remote areas and were unable to come again for follow up. In our study 56% women discontinued due to irregular bleeding which is higher than the study of Nair *et al* (2017) where irregular spotting occurred in 45% of women. Amenorrhea was seen in 15% of the women which is higher than Fonsea M *et al* 4.5% but lower than Nair *et al* where amenorrhea occurred in 65% of the women. However amenorrhea is beneficial for women suffering from anemia, dysmenorrhea and menorrhagia and amenorrhic women wanted to continue due to its beneficial effect on heath [8]. In post-partum women lactation remained unaffected and weight gain was seen only in 4 women which could be due to other factors [9] Only 5 women had headache and backache. Two women developed hypertension (both are more than 40 years so it may be due to the age factor). So discontinuation due to weight gain, headache, backache was not seen in our study. Contraception is always associated with apprehension and misinformation and it is more in rural women due to their illiteracy but with proper selection of cases with good counseling and diligent follow up compliance can be improved [10].

Conclusion

In a developing country like India where infant and perinatal mortality is high it is better to use temporary methods rather than permanent until the baby becomes older. In such cases DMPA appears to be the best option. Women need to be educated and empowered so that they can control their fertility and have access to a wide range of contraceptives suited to their age and reproductive life stage. The study concludes that DMPA is a very effective contraceptive. Rural women accept it very easily without much degree of motivation. However side effect decreases compliance.

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