http://jmscr.igmpublication.org/home/
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v7i12.56

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Original Article

Depot medroxy progesterone acetate (DMPA): Its acceptance, compliance and factors influencing continuation rates among women attending Lal Ded Hospital in Kashmir

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Abstract
Background: *The unmet needs for contraception in our country is about 13%.Therefore in order to achieve a good community health and to reduce the unwanted pregnancy rates a good contraceptive advice is the need of hour.*
Methods: *The present study was a longitudinal hospital based study which was conducted at Lal Ded Hospital, an associated hospital of Government Medical College Srinagar with an aim to estimate the acceptance, compliance and factors influencing continuation rates of Depot medroxy progesterone acetate among women attending Lal Ded Hospital in Kashmir for contraceptive advices. The study was conducted over the time period of 15 months. Meticulous follow up was kept for all the women recruited in the study.*
Results: *The study concluded that depot medroxy progesterone acetate is highly effective contraceptive with low failure rate, and high acceptability when women are effectively counselled. Also, it should be made freely and easily available through health care facilities.*
Conclusions: *It should be available as a first line method to all who wish to opt for reversible methods of contraceptive.*
Keywords: *Antara, Acceptance, Contraceptive, Counselling, DMPA.*

Introduction

One of the first National programmes to be started after Indian independence was National Family Planning Programme during the year 1952. The programme was begun with the establishment of few clinics and distribution of material on education, training and research. India was the first country to launch its national family welfare programme for its population. Since then it has undergone transformation in terms of policies and actual programme implementation(1). As per the latest data DLHS III statistics, the unmet need of contraception is 21.3%. When comparing the previous data from DLHS I, DLHS II and DLHS III, there has been a decline of 16% in the total unmet need from DLHS I to DLHS II, but only

0.2% from DLHS II to DLHS III, which is the matter of concern. In order to know the level of unmet needs in the population, more awareness and education about different methods of contraception is the need of the hour. Woman may have one or more reasons for not intending to use contraceptives. A recent study among rural Woman showed that a large number of women (65.3%) wanted to use contraceptives but were unable to do so due to lack of knowledge (38.9%), fear of side effects (15.5%), husband /family disapproval (15.5%), inconvenience (10.7%), among other reasons[2]. For successful family planning practices among the beneficiaries, the knowledge about contraceptive, its acceptance and strict adherence is very important. Researchers believe that quality of contraceptive counselling and education about the method is one of the most important factor which leads to the method continuation. Each Contraceptive method has unique feature which also influence likelihood of method and contraceptive continuation as reported by Ali et Al, the method specific discontinuation rate for DMPA was 40.6%.[3]. A study across 15 countries showed that between 7 and 27% of women discontinued contraception because of poor service quality.[4]

Injectable Contraceptive, Depot medroxy progesterone acetate (DMPA) is an aqueous suspension of microcrystal for depot injection of pregnane 17 alfa – hydroxyprogesterone – derivative progestin medroxyprogesterone acetate. DMPA is a Progestogen-only Injectable (POI) given deep intra-muscular every three months (one dose = one vial of 150 mg, aqueous suspension of DMPA). DMPA is a safe contraceptive. Many believe that DMPA would be a game changer For increasing access to contraception.[5] Like other progestogen-only contraceptives women who want a highly effective contraceptive can use it, including women who are breastfeeding or who are not eligible to use estrogen-containing combined oral contraceptives. Many studies have shown the discontinuation rates of DMPA[7,8,9] yet little is known about other predictors of adherence of DMPA, including quality of care and experience of side effects. We conducted this study with an aim to estimate the acceptance, compliance and factors influencing continuation rates among women attending Lal Ded Hospital in Kashmir.

Material and Method

This longitudinal hospital based study was conducted in the Department of Obstetrics and Gynecology, Lal Ded Hospital (An associated Hospital of Government Medical College, Srinagar) which is Kashmir valley's biggest Maternity hospital with a bed strength of 730 and daily foot fall of around 10,000 patients. The study was done prospectively for a period of 15 months from January 2018 to July 2019. All women attending the family welfare clinic of the said hospital were offered free choice to select contraceptive methods for themselves from a basket of choices (Cafeteria approach). They were explained well about the benefits and side-effects of each contraceptive method individually. Those who opted for injection DMPA were assessed for MEC.[6] Women falling under Category I & II were selected for the study. A total of 1000 women opted for DMPA over the study period. Informed consent was obtained from each participant before enrolling in the study. The participants were provided injections either in the first week of menses, immediate post abortal or at 40 -45 days of Post-partum period. A detailed counselling was done to these participants. A special mPA card was issued to each participant in which all the detailed information regarding their medical history, date of injection and the date of next appointment was mentioned. The innitial entry was made on the card and the same copy was maintained in hospital to track the patient on the date mentioned. The counselling covered both contraceptive and non contraceptive benefits of Injection DMPA. The side effects they could expect such as bleeding changes, weight gain, delayed return of fertility etc. were also explained to the participants. During counselling patients

were explained the measures to handle these side effects. Each participant was followed up meticulously to avoid any loss to follow up.

Analysis: Measures of central tendency were used to extract frequency of variable using charts and tables.

Ethical Issues: The study has no ethical issues related to animal or human experimentation.

Results

The mean age of the participants was 31 ± 7.6 years ranging from 20 to 43 years. In this study Majority 585 (58.5%) of the study participants belonged to the age group of 25-30 years followed by 275 (27.5%) in the age group of 20-25 years. (Table 1).

Table 1: Age distribution of study participants using DMPA

Age (Yrs)	Frequency (n)	Percentage (%)
15-20	0	0
20-25	275	27.5
25-30	585	58.5
30-35	110	11
> 35	30	3
Total	**1000**	**100**

The parity of the study participants is shown in table 2.

520 (52%) of the study participants had parity 2 followed by participants with para 1, 300 (30%) participants. It was seen with parity 3 or more the number of participants decreased to 11% and 7% respectively

Table 2: Parity of study participants using DMPA

Parity	Frequency (n)	Percentage (%)
Nulligravida	0	0
1	300	30
2	520	52
3	110	11
> 3	70	7
Total	**1000**	**100**

As the participants were followed for more than 1 year, the discontinuation rate of injection DMPA was observed over the period of time. The discontinuation rate of injection DMPA after the first injection was seen in 142 women, among 115 women after 2nd Injection. In this study patient reported for 3rd, 4th, 5th n 6th dose. However the continuation rates after 3rd, 4th n 5th injection decreased and were depicted by discontinuation rates of 62, 60 and 28 patients respectively.

Table 3: Discontinuation rate of DMPA among study participants

Discontinuation Rate	Frequency (n)
After 1st Injection	142
After 2nd Injection	115
After 3rd Injection	62
After 4th Injection	60
After 5th Injection	28

Table 4 shows the occurrence of side effects among the study participants after injection DMPA. Most of the study participants reported with irregular bleeding 620 (62%), Amenorrhea 180 (18%), weight gain 80 (8%), head ache 20 (2%). Among the study participants, 100 (10%) did not reported any side effects and were happy with its use and continued up-to 6th dose.

Table 4: Side effects of DMPA among study participants

Side Effects	Frequency (n)	Percentage (%)
Irregular bleeding	620	62
Amenorrhea	180	18
Weight gain	80	8
Headache	20	2
No Complications	100	10

The attrition rate of DMPA among the study participants was observed and it was seen that majority 300 (30%) women had attritions due to side effects, 130 (13%) planned for pregnancy during the study period, 180 (18%) missed the dose of the injection while 120 (12%) opted for a new contraceptive. (Table 5).

Table 5: Reasons for attrition of DMPA among study participants

Reason	Frequency (n)	Percentage (%)
Side effects	300	30
Lost to Follow up	270	27
Planning pregnancy	130	13
Missed Injection	180	18
Date/changed contraception	120	12

IPC (Interpersonal Communication & BCC (Behavioral Change Communication) were used as the methods of Communication to sensitize and

Counsel beneficiaries to adopt one or the other type of contraceptive. In our study all the 1000 beneficiaries were given Information about DMPA (Injection Antara). Initial Refusal was found in 35 (3.5) % , Motivated but still needed follow up for complete acceptance were 128 (12.8) beneficiaries (IPC Imparted), Highly Motivated after Counselling and communication accepted the method 250 (25 %), Both IPC as well as BCC Imparted , Highly Motivated after Counselling and communication accepted the method and came for follow up i.e., 2nd , 3rd and 4th dose 500 (50 %) Both IPC as well as BCC Imparted and not the least Highly Motivated after Counselling and communication accepted the method and came for follow up 5th and 6th dose 87 (8.7) Which suggests that combination of both IPC as well as BCC are excellent methods of counselling and motivation.

Table 6: Counselling and Compliance after Imparting Interpersonal Communication (IPC) & Behavioral Change Communication (BCC)

Reason	Method of Communication Used	Frequency (n)	Percentage (%)
Initial Refusal Due to Misinformation about the method	No Method	35	3.5
Motivated but still needed follow up for complete Acceptance	IPC	128	12.8
Highly Motivated after Counselling and communication accepted the method	IPC and BCC	250	25
Highly Motivated after Counselling and communication accepted the method and came for follow up i.e., 2nd , 3rd and 4th dose	IPC and BCC	500	50
Highly Motivated after Counselling and communication accepted the method and came for follow up 5th and 6th dose	IPC and BCC	87	8.7

Discussion

DMPA has a lot of Myths and Misconceptions associated with it. Theses misconceptions are developed because of misinformation about alteration in cycles which makes potential users anxious and biased against use[10]. Studies in the U.S., China, Mexico, and South Africa, women who received more intensive structured counseling, including discussion about side effects, were more likely to continue DMPA use [11,12,13]. So if the beneficiaries are properly counselled through effective communication the acceptance of the method can be increased as seen in our study in which IPC & BCC both were used and rates of acceptance and continuation in these groups were higher.

Considering the fact: That DMPA is very effective, long acting, reversible, easy to maintain privacy, not a coitus-related method no daily pill-taking is required ,allows some flexibility in return visits (Client can return as much as 2 weeks early or late than due date for injection), quantity and quality of breast milk is not affected, can be used by nursing mothers as soon as 6 weeks after childbirth, no estrogen side-effects like dyslipidemia and increased risk of heart attack etc. prevent ectopic pregnancies, endometrial cancer, uterine fibroids may help in preventing ovarian cancer and iron-deficiency anemia may make seizures less frequent in women with epilepsy make sickle cell crises less frequent and less painful and

If all these positive traits of this method is properly presented before the beneficiary it still remains one of the best and effective methods of Contraception. Numerous studies have been published to substantiate the impact of Counselling on acceptance of contraceptive Method. These studies have been published either based on European (CHoICE study) or in U.S population (CHOICE project). In these studies structured counselling helping almost al woman

who were undecided, prior to counselling decided to choose upon a particular hormonal contraception[10]

In our Study the Acceptance and continuation rates were higher in women with age group 20-25yrs(27.5%) and 25-30yrs (58.5%). Also increased parity showed higher acceptance and continuation in our study owing to the fact that this group of women were more receptive to the counselling. The main side effect observed with DMPA was menstrual abnormalities and it was are the most frequent reason for discontinuation, In our study the main menstrual problem encountered was irregular bleeding (62%) However Pre use counselling the woman regarding menstrual irregularities expected with the method was beneficial in our study. The Second most common problem observed in our study was amenorrhea (18%). Counselling the women with regard to amenorrhra as a means of eliminating monthly blood loss, menstrual cramps encouraged n improved the continuation rates in this group, as almost 60 percent amenorrheic women continued the method. It can be well concluded from our study that if the side effects of this method were well explained in pre use counselling the discontinuation rates can be reduced to greater extent.

Conclusion

DMPA still remains one of the best and highly Acceptable hormonal contraceptive if the client is well informed about the method. Therefore DMPA is a real challenge lying ahead for unmet needs of contraception & should be available as the first line method to all who wish to make an informed choice for long acting reversible contraceptives. Pre-use counselling regarding side effects like irregular bleedIng amenorrhea will further improve acceptance, satisfaction and continuation rates of DMPA.

Conflict of Interest: None declared
Source of Funding: None.

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