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## D, M.P.A as the choice of contraceptive among tribal women visiting at a tertiary care centre in Eastern India: A prospective study

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### Abstract

To meet the need to control the growing population of developing countries like India, the introduction of various permanent and temporary family planning methods has presented ample options. The long-acting injectable progestogens such as D.M.P.A are highly effective, safe, long-acting and user-friendly contraception, proving to be a flexible option for women, for whom estrogen-containing contraceptives are medically contraindicated.

**Objectives:** To evaluate the acceptance of D.M.P. A. Among the tribal women visiting the tertiary care centre in eastern India.

**Methodology:** This prospective observational study was conducted at the department of Obstetrics/Gynaecology of M.G.M Medical College and Hospital, Jamshedpur, over the period of June 2022 to October 2023. 109 tribal women participated in the study, were followed up on every 3months, and an assessment was done using questionnaires during their follow-up.

**Results:** Out of 109 tribal women, 31 women belonged to a group of 28 y-31 yrs., 33 women had primary educations. 73 women were from rural areas, 63 women were para 2, and the majority of patients chose to have it after 6 weeks of delivery. 62 patients continued to follow up for 3 months, while 43 patients discontinued. The most common reason for acceptance of DMPA was that there was no monthly bleeding, while 19 women discontinued due to its side effects, such as spotting, and 14 women lost their follow-up.

**Conclusion:** Promotion of use of injectable contraceptives should be done through social marketing, campaigns by health workers and family planning camps by circulating proper information, especially in rural areas among tribal communities.

**Keywords:** Eastern India, tribal communities, tribal women visiting, tertiary care centre

### Introduction

National Family Health Survey-3 (NFHS-3) reported a 13% unmet need for contraception, and half of this required for spacing methods <sup>[1]</sup>. Introduction of injectable contraception has emerged as revolution in family planning programs especially for one who wants to avoid IUCD insertion.

No birth control method has claimed to be 100% effective, and side effects are not a dangerous to life, but rather an inconvenience. Injectable contraceptives are meant to prevent conception, in addition to convenience, privacy, safe and efficient protection to women <sup>[2]</sup>. Depo medroxy progesterone acetate (DMPA) is currently used by reproductive women in 130 countries <sup>[3]</sup>.

D.M.P.A has features of an "ideal contraceptive" : Safe, effective, acceptable, inexpensive, reversible, simple to administer, independent of coitus, long-lasting, requiring little or no medical supervision [4, 3]. Depot medroxy progesterone acetate, or DMPA, is a progestin-only method of contraception <sup>[4]</sup>. It is a long-acting reversible contraceptive <sup>[4]</sup>. It is a 3-monthly intramuscular injectable that delivers 150 mg of medroxyprogesterone acetate in microcrystalline suspension form that delays absorption of the hormone <sup>[4]</sup>. It provides long-acting, effective and reversible contraception <sup>[4]</sup>. It is well-accepted by women who cannot remember to take oral contraceptive pills regularly and by those who refuse insertion of an IUD <sup>[4]</sup>. Concern regarding postpartum administration is mostly related to theoretical risk to the infant's health <sup>[4]</sup>. Among the various social groups in India, most tribes are socioeconomically deprived, with low literacy with limited access to reproductive health information <sup>[5]</sup>. In view of promoting acceptance of D.M.P.A., the study was conducted to evaluate its acceptance among tribal women visiting at a tertiary care centre, as well to enlighten them about its benefits.

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## Methodology

This was a prospective observational study conducted at the Department of Obstetrics and Gynaecology, M.G.M. Medical College and Hospital, Jamshedpur, between June 2022-October 2023. 109 patients enrolled in the study. Patients were given detailed information on the benefits & possible side effects of D.M.P.A. These patients were followed up every 3 months for subsequent dosage of D.M.P.A and data collected and compiled using SPSS software 2017. Permission from the ethical committee was obtained before proceeding with the study.

## Inclusion Criteria <sup>[4]</sup>

- Women aged between 18-45 years want to use D.M.P.A as contraception.
- During the first seven days of the menstrual cycle.
- Within 7 days of post abortion and.
- Following 6 weeks post-partum.
- Willing to participate in study.

## Exclusion Criteria <sup>[4]</sup>

Patients who are

- Unwilling to participate aged between 18yrs and 45 yrs.
- Age falls outside the range of 18 yr.- 45 yrs.

In our setting tribal patients coming to our O.P.D within the first seven days of cycle, within 7 days of abortion and after 6 weeks of post-partum were counselled. They were explained regarding safety, efficacy and side effects if D.M.P.A. patients details and personal history were focused and consent were taken. 150 mg of D.M.P.A were given intra-muscularly. If the women failed to follow up on the given date for the next dose of injection and if she had history of amenorrhea she was advised to take a urine pregnancy test to rule out pregnancy before she was given the next dose <sup>[4]</sup>. A DMPA card was filled with patient details A separate register was maintained in the hospital ward <sup>[4]</sup>. The data from the DMPA Card and register was used to determine <sup>[4]</sup>.

- Acceptance of the injection is the number of patients willing to take the injection after counselling <sup>[4]</sup>.
- Compliance of the injection is the number of patients coming for regular follow-up <sup>[4]</sup>.

## Results

**Table 1:** Based on the demographic profile of patients

Age (in years )	Variables (N=109)	Percentage
18-22y	21	19.27
23-27 y	30	27.52
28-31y	31	28.44
32-36 y	16	14.68
>36y	11	10.09
<b>Education status</b>		
Illiterate	28	25.69
primary	33	30.28
matriculation	24	22.09
Higher secondary	11	10.09
Graduate	9	8.26
Higher education	4	3.67
<b>Residence</b>		
Rural	73	66.97
urban	36	33.03

A total of 109 eligible tribal women came to OPD, opting for D.M.P.A as a contraceptive. The demographic study showed that the majority of women, 28.44% belonged to the age group of 28

yrs.- 31 yrs., closely followed by the age group of 23-27 yrs.- 27.52%. 73 women came from rural parts of the Kolhan area, 30.28% had primary education, while 25.69% were illiterate. Based on parity majority of patients were para 2 (57.80%) followed by para 3 and more (22.94%). Spacing out subsequent pregnancies for a better lifestyle is a priority for multiparous patients.

**Table 2:** Based on parity

Parity	Variables (N=109)	Percentage
Para 1	21	19.27
Para 2	63	57.80
>= para 3	25	22.94

33.03% of patients chose to use injection DMPA during the first seven days of the menstrual cycle and after 6 weeks of delivery. 15.60% patients opted for DMPA as contraception during the first seven days of abortion

**Table 3:** Based on the timing of the injection

Timing of injection	Variable (N=109)	Percentage
During the first seven days of the menstrual cycle	36	33.03
After 6 weeks of delivery	56	51.38
Post-abortion	17	15.59

Out of 109 patients who opted for DMPA as the choice of contraception in the first place 62 patients continued their follow-up up while 47 patients discontinued the injection for various reasons.

**Table 4:** Based on reasons for acceptance of DMPA <sup>[10]</sup>

Reasons for acceptance	Variables	Percentage
Easy to use	14	12.84
Easy to administer	10	09.17
Breastfeeding friendly	9	8.26
No daily use	12	11.01
No monthly bleeding	17	15.60

\*Only 62 patients came for subsequent follow-up  
47 patients discontinued DMPA. They gave various reasons for this.

**Table 5:** Based on reasons for discontinuation of DMPA

Reasons for discontinuation	Variables	Percentage
Due to side effects	19	17.43
Planning pregnancy	06	5.50
Missed the date	14	12.84
Switched to other contraception	04	3.67
Anxiety	02	1.83
Pressure from family /husband	02	1.83

## Discussion

This study was conducted to assess the acceptance of DMPA among tribal women. Ours study included 109 tribal women coming from various areas of Jharkhand for contraception at our hospital. Women were provided complete information on its usage's pros and cons. Most women in our study were between the ages of 28-31 years (28.44%) similar to study done by Divya *et al.* where it was found that 28.2% of DMPA contraceptive users were in the age group of 21-25 years <sup>[6]</sup>. Our study shows 57.80% of women were 2<sup>nd</sup> para and 22.94% were more than 3<sup>rd</sup> para that shows multiparous women realizes the importance of spacing the subsequent pregnancies which is higher in percentage compare to study done by Nupur, *et al.* that showed, 2<sup>nd</sup> para-36%, 3<sup>rd</sup> para-11.3%, and 4<sup>th</sup> para-2.7%

accepted injection depot medroxyprogesterone acetate as a temporary method of contraception<sup>[4]</sup>. A study by Nautiyal R, *et al* showed primiparous-51% and multiparous-49%<sup>[7]</sup> and in a study by Rai L, *et al*, Primiparous-73% and multiparous-27%, which shows DMPA was quite popular among primiparous than multiparous in their study<sup>[8]</sup>.

Educated women are the mirror of society. 30.28% women in our study had received primary education whereas 25.69% were illiterate. This implies more awareness is required to increase its acceptance, thereby decreasing the growing financial burden on the family. Tribal people's upliftment is only possible through education, which shows them the path of growth and enlightenment.

33.03% women took an injection during the first seven days of the menstrual cycle, and after 6 weeks of delivery, respectively, 15.60% women took post abortion. The less number of women accepting post abortion is result of taboo of excessive bleeding following abortion, whereas acceptance among women after 6 weeks of delivery is due to fear of conception of during 6 months of postpartum. Fear of excessive bleeding following intra uterine devices has escalated the acceptance of DMPA among these women as it comes as a boon of no menses at all for 3 months following the injection, easy to use and administer with no expertise knowledge and follow up. A study by Lavanya Rai, *et al.*, 51% belong to post-partum period, while the rest either chose to take within 7 days post abortion or interval users<sup>[8]</sup> and similar study by Dr Pratibha Singh *et al*, 75% took DMPA Post-delivery and 47% took during post-abortion period<sup>[9]</sup>.

### Data Analysis

The data collected was transformed into a standard MS Excel 2017 sheet for further processing and analysis. The same will be transferred to SPSS software version 20 for further analysis. The results were summarised in tables. The names of patients are kept confidential.

### Conflict of Interest

Not available

### Financial Support

Not available

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### How to Cite This Article

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