

# Study of Effectiveness and Safety of Inj DMPA in Postpartum Period

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**Abstract:** Depot medroxyprogesterone acetate (DMPA) provides safe and effective contraception in postpartum period. **Aims and objectives:** to study acceptance and compliance of DMPA, observe side effects related to usage of DMPA and establish its effectiveness as contraception method. **Methods:** this is prospective study carried out at Obstetrics and Gynaecology department of D. Y Patil Hospital, Navi Mumbai Maharashtra. Over period of 18 months followed up on OPD basis. **Result:** out of 100 cases selected 42% were in age group of 26 to 30, 51% were from lower socio economic class. Amenorrhoea and irregular spotting found in 68% and 42% respectively. There was no cases of pregnancy in present study. **Conclusion:** DMPA is an effective, safe and convenient method of contraception in lactating period. Proper counseling will increase acceptance of DMPA.

**Keywords:** injection DMPA, contraception, postpartum, fertility

## 1. Introduction

Population explosion is one of the major problem of the developing countries like India. Contraceptive prevalence in our country is 54.8% [1]. Moreover contraception in postpartum period is a major challenge. Popular methods offered are barrier, contraceptive pills, IUCD, sterilization, Depot medroxy progesterone (DMPA). Inj Depot medroxy progesterone has been found to provide effective, long acting and reversible contraception. its 12 week dosing results in patient convenience, avoiding need for daily compliance or use at time of intercourse [2]. It is to be given deep intramuscular so not much training of staff is required. One injection at every three months and less side effects makes compliance better in temporary motivated postpartum women specially in low resource settings.

Ideal time to initiate DMPA is within 5 days of onset of menses this ensures patient is not pregnant and prevents ovulation during first month of use. WHO recommends DMPA in breastfeeding women be initiated at 6 weeks due to theoretical concerns about infant safety [2]. In Indian set up delaying contraception until 6 weeks postpartum may increase risk of unintended pregnancy and large amount lost to follow up. ACOG recognizes the need for contraception against theoretical neonatal risks and endorses earlier initiation of DMPA. [3] Injection DMPA has typical use failure rate of 0.3 per 100 woman years [4]. Major side effects with DMPA includes menstrual disturbance, weight gain, mood changes etc. inj DMPA does not have any permanent effect on fertility. It has been shown that after discontinuation normal period cycle returns by 8 months and normal fertility returns by 18 months. Here we aim to study acceptance and effect of inj DMPA in immediate postpartum period

## 2. Materials and Methods

This is a prospective study conducted at Obstetrics and Gynaecology department, D. Y Patil Hospital, Navi Mumbai, Maharashtra. After approval from institute, and patients consent before joining this study.

Study conducted for total duration of 18 months from July 2020 to January 2021. A total of 100 women who were

apparently healthy, aged 21 to 35 years, breastfeeding, ready to follow up and wanted a long term reversible contraception were recruited for this study.

### Eligibility criteria

- Age 21 to 35 years
- Patient desiring long term, non coitus depended contraceptive method
- Willing for regular follow up and gives consent for study
- Apparently healthy with no associated medical condition like anaemia, diabetes, hypertension, cardiac disease.
- Had term delivery and breast feeding at the time of discharge

All women willing for contraception were given options and explained well about benefits and side effects of each contraceptive methods. Women opting for inj DMPA were chosen for this study. After proper counseling and informed written consent 100 women were enrolled in the study. All women underwent through general physical examination. DMPA 150 mg IM given deep intramuscular in upper lateral gluteal region using 24 gauge needle. The schedule consisted of injection within 6 weeks of postpartum. All women were asked to maintain diary to remember the date of their next injection. All women were followed up for 1 year after the first injection for side effects, failure, patient satisfaction and willingness of continuation. Patient wanted to go for any other method were excluded from study.

## 3. Results

This is single centered study, rate of deliveries in our hospital is around 10, 000 per year. Table 1 shows average no of women in both LSCS and vaginal delivery (ND) cases who choose DMPA as contraceptive along with women who chose other method. Around 35% to 39% women in postpartum period chose DMPA, while OC pills found to be 2<sup>nd</sup> contraceptive of choice.

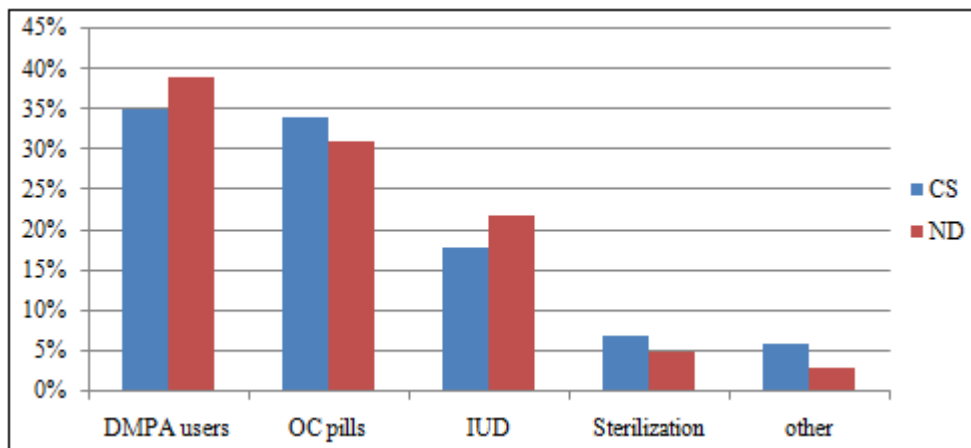
**Table 1**

Delivery rate	CS (39%)	ND (51%)
DMPA users	35%	39%
OC pills	34%	31%
IUD	18%	22%
Sterilization	7%	5%
other	6%	3%

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4. Discussion

Patients Characteristics

(1) Age and parity

Our study included apparently healthy women in age group of 21 to 35.

Table 2

Age/parity	Primi para	2 <sup>nd</sup> para	3 <sup>rd</sup> and more
21 - 25	09	12	06
26 - 30	13	18	10
31 - 35	13	10	09

- (2) Majority of our patients were from lower middle class (51%), 38% were from lower socio economic class while 11% from upper middle class.
- (3) No of injections 72% took more than 3 injections and 9% took only one injection and left study in the middle.

Table 3

No. of injections	No. of patients
1	9
2	7
3	13
>3	72

Side Effects

Table 4 shows important side effects of this contraception. Amenorrhoea (68%) and irregular bleeding (42%) were most commonside effects. Irregular bleeding was not heavy rather continued on and off spotting. None experienced an episode of profuse bleeding.

Table 4

Side effects	No of patients
amenorrhoea	68
Irregular bleeding	42
Weight gain and mood changes	8
Headache and abdominal pain	9
Miscellaneous*	5

\*backache, dyspaerunia, erythma nodosum.

- (4) 98% women in our study group were satisfied with their lactation amount
- All the subjects were followed to complete a one year follow up. At the end of study 70% of women were happy with DMPA as contraception and opted to continue it while 25% switched to alternate contraceptive methods.

The current TFR (Total fertility rate) of 2.4 in 2012 is down from 3.1 children per woman in 2001. Contraception Prevalence Rate (CPR) for modern methods has been increasing steadily from 36.5% in 1992 - 1993 to 48.5% in 2005 - 2006 [5]. 1.5% live births occur within one year of previous pregnancy [6].

Birth control methods have been used since ancient times, but effective and safe methods only became available in 20<sup>th</sup> century [7].

Planning provision and use of birth control is called family planning [8].

Depot medroxyprogesterone acetate is highly effective, safe and long term method of contraception. Its easy 3 monthly administration schedule requires minimal patient compliance.

Major complication leading to discontinuation of its use is amenorrhoea (68%) and related menstrual irregularities (48%). Irregular bleeding is scanty and rarely heavy thus fear of anaemia is less, besides amenorrhoea is beneficial in women with anaemia, menorrhagia and dysmenorrhoea. Weight gain associated with DMPA use was only marginal and could not be attributed to DMPA alone. DMPA has many other non - contraceptive benefits such as prevention of endometrial cancer, ectopic pregnancy, dysmenorrhoea and in mangment of endometriosis [9]. Use of DMPA has no permanent effect on fertility. Unlike barrier method it is coitus independent and hassles of daily intake like combined pills was not there.

Most important issue regarding use of DMPA is that of patient information. Pre - use counseling is essential tool to minimize drop out rates.

5. Conclusion

Injectable DMPA in postpartum period is safe and effective method with less side effects hence it should be available as a first line method to all postpartum women who wish a long term reversible method of contraception. Menstrual side effects limiting use of DMPA can overcome with proper counseling and education.

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