

## SUBSEQUENT FERTILITY FOLLOWING CONTRACEPTION WITH LONG ACTING MEDROXYPROGESTERONE ACETATE

by

AMY D. ENGINEER,\* M.D., F.R.C.S., F.R.C.O.G.

and

PRABHA TANDON,\*\* M.S., D.G.O.

Hormonal contraceptives have been widely used as a means of family planning in the last decade, but the ideal contraceptive has yet to be discovered and the search is still on for a safe, effective, reversible and inexpensive method.

Though the cyclic administration of tablets containing combinations of oestrogen and progestogen have proved an inestimable boon to countless women in the West it is difficult to inculcate the habit of regular pill taking in the women of our province and that led to the initiation of a trial with an injectable progestogen, Medroxyprogesterone acetate (Depo-Provera), in the Family Planning Clinic attached to the Queen Mary's Hospital, Lucknow, the results of which have been submitted for publication (Engineer and Sanwal, 1973). As the principal side effects noted during the trial were the occurrence of oligomenorrhoea and amenorrhoea along with marked endometrial atrophy it was felt that an investigation into the subsequent fertility of these women was imperative, and so a follow up study of the 146 women who had received the injections was started in November, 1970 and concluded in March, 1972.

\*Prof. & Head of the Department of Obstetrics & Gynaecology.

\*\*Ex-Lecturer, K. G.'s Medical College, Lucknow.

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### Material and Method

All the 146 women who received Medroxyprogesterone acetate injections were included in the study but follow-up was possible in only 78 (53.4%). Twenty-nine women were further excluded from the study as 26 had immediately switched over to other methods of contraception after discontinuation of the injections, two had tubectomy performed and one was separated from her husband.

The subsequent fertility and menstrual history of the remaining 49 women is, therefore, the subject matter of this paper.

### Observations and Results

Conception occurred in 35 out of the 49 women followed (71.4%). The interval between the discontinuation of injections and occurrence of pregnancy varied from 1 to 39 months and is shown in Table I, from which it is apparent that

TABLE I  
*Time of Occurrence of Conception*

Time of occurrence of conception (in months)	Number
1 to 3	7
4 to 6	7
7 to 9	5
10 to 12	6
13 to 15	3
16 to 27	4
28 to 39	3
Total	35

71% of conceptions occurred within one year of discontinuation of the injections, after discontinuing the injections, while one other woman conceived after 6 months without having had any period at all. The remaining 7 conceived within 5 to 24 months of discontinuation of therapy.

Twenty-five of the 35 women who conceived delivered normally at term (71.4%), while 10 women aborted (28.5%). Two of these abortions were induced hence the spontaneous abortion rate was 22.8% (8 out of 35). Three successive abortions occurred in one case followed by a delivery at term.

#### Subsequent Menstrual Pattern

Menstrual pattern was evaluated in all the 78 cases followed and the results are shown in Table II.

TABLE II  
Menstrual Pattern

Menstrual pattern	During DMPA	After discontinuation	Time interval for return of normal periods (in months)							Number conceived	
			1-2	3-4	5-6	7-8	9-10	11-15	16-20		21-24
Amenorrhoea	34	24	12	3	6	—	1	—	1	1	10
B. T. B.	20	8	4	4	—	—	—	—	—	—	10
Irregular	10	3	3	—	—	—	—	—	—	—	7
Scanty	7	4	3	1	—	—	—	—	—	—	3
Heavy	4	1	1	—	—	—	—	—	—	—	3
Regular	3	38	—	—	—	—	—	—	—	—	2
Total	78	78	23	8	6	—	1	—	1	1	35

All patients who had irregular or scanty periods during therapy reverted to normal pattern within 2 to 4 months following discontinuation of the injections. Thirty-four women had amenorrhoea during Medroxyprogesterone medication and this persisted after discontinuation for periods varying from 2 to 24 months in twenty-four women. At the end of two years 10 conceptions were recorded in this group. Two of these occurred immediately after the first period, which came on 10 and 16 months

#### Discussion

In spite of marked endometrial atrophy and high incidence of amenorrhoea it is reassuring to note that subsequent fertility is not impaired by Medroxyprogesterone acetate administration. This has disproved the apprehension raised about this drug at the 4th Asian Congress of Obstetrics and Gynaecology at Singapore where it was recommended that the drug should not be given to women who would subsequently want another child but that

TABLE III  
Relationship of Subsequent Fertility to Total Dosage

Total Dose (in mg.)	Total number of cases	Number excluded	Number remaining	Number of conceptions
50	12	3	9	9 (100%)
100	5	1	4	4 (100%)
150	16	6	10	8 (80%)
200	9	4	5	5 (100%)
250	3	1	2	2 (100%)
300	6	3	3	2 (66%)
350	2	1	1	—
400	2	2	—	—
450	5	2	3	1 (33%)
550	1	1	—	—
600	4	1	3	—
650	1	—	1	1 (100%)
700	1	—	1	1 (100%)
750	2	—	2	1 (50%)
800	1	1	—	—
900	4	1	3	—
950	1	—	1	—
1000	1	1	—	—
1150	1	—	1	1 (100%)
1450	1	1	—	—
Total	78	29	49	35

it was a good method for those who demanded family limitation.

Keifer *et al.*, (1970) have reported a delay of 42 to 60 weeks in conception following medication of monthly injections of Depo Medroxyprogesterone acetate. On the other hand, Powell *et al.*, (1970) have not reported any impairment in fertility, for in their series conception occurred within twelve months in over 60% of women after discontinuation of the drug. In the present study conception occurred in 71% of cases within twelve months of discontinuation of the drug.

Repeated injections of Medroxyprogesterone acetate produce profound atrophy of the endometrium (Mishell *et al.*, 1968; Seymour and Powell, 1970; and Tietze,

1968) and this was our finding too. Lee (1969) has reported that the functional integrity of endometrium returned to secretory within nine to twelve months after termination of therapy. In the present series secretory changes in the endometrium were found within three to six months after stoppage of the drug.

#### Comments

This study reveals that injections of Medoxyprogesterone acetate are an effective method of contraception and in spite of marked endometrial atrophy and amenorrhoea in approximately 60% of cases, there is no permanent impairment of reproductive potential as conception occurred in 71% of cases within twelve months of discontinuing the drug.

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