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Douglas Huber Makhlisur Rahman J. Chakraborty

Cholera Research Laboratory

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In October, 1975 the Cholera Research Laboratory (CRL), Matlab started a house-to-house distribution of oral contraceptives among all married women aged 15-44 in 150 villages of its field surveillance area with a population of about 1.25 lakhs. Within 6 months of the initial distribution, 24% of the eligible women became users of pills. Before starting the project there were only 1% of eligible women using some modern method of birth control in this area.

But it was soon discovered that a good number of women abandoned use either for the reason that taking a pill every day seemed to be bothersome or due to complaints of dizziness, bleeding, weakness, etc. which reduced their work capacity and thereby incurred the displeasure of husbands and mother-in-laws. Many of these women spontaneously made the suggestion of providing them birth control injections which could relieve them from taking a daily pill. Some may also have wanted a method less obvious to their husbands and mothers-in-law. (Injectables were known to some women through the Fertility Research Clinic at Matlab).

As a response to this interest, the Contraceptive Distribution Project made DMPA available, on a house-to-house basis, to all eligible women in six villages of the contraceptive distribution area with a population of approximately 8 thousand people. The distribution of DMPA was started in August, 1976 in conjunction with the distribution of pills and condoms in the area.

This report summarizes our experiences with 103 women who enrolled in the study as initial acceptors of six-month injections (450 mgm. dose - 3 cc) and 70 women as initial acceptors of three-month injections (150 mgm. dose - 1 cc) from August through December, 1976.

WORK PROCEDURE

Eligibility: Married women of age 15-44 years were considered eligible for taking injections. Pregnant women were, of course, excluded, as were parity zero women, and women less than 6 months post-partum amenorrhea.

Time of Injection: Injections of DMPA were given any time during the menstrual cycle, provided there was reasonable assurance the client was not already pregnant. Women receiving injections after 10 days of starting the last menstrual bleeding were instructed to use condoms for 2 weeks.

* Depo-Provera (depo-medroxyprogesterone acetate, DMPA)

Administering Injections: One experienced Senior Field Assistant of the CRL was assigned for selecting clients and giving injections in the field. He along with the local Dai of the CRL went door-to-door of the eligible women carrying a kit of DMPA injections, pills and condoms. He explained the injections especially among those who were not active users of any method of birth control or who abandoned use for one reason or another. He also provided information and supplies of pills and condoms among those who were reluctant to accept injections. Disposable needles and syringes were used for each injection to prevent infections.

Follow-up: The acceptors were followed-up within 15 days of receiving first injections. Subsequent follow-up visits were made at one-month intervals. The follow-up visits aimed at inquiring about and helping with problems the acceptors might have.

Seven regular oral contraceptive tablets (Norinyl 1+50) were initially given to each woman. She was instructed that irregular bleeding may occur and that one tablet taken for seven days would reduce the bleeding temporarily. After completing the seven tablets she would then have withdrawal bleeding, similar to a regular menstrual period. If any severe problem should arise, she could inform the dai who would arrange transport to the FRP clinic or the CRL Hospital at Matlab.

RESULTS

Use Pattern:

Table 1 indicates the contraceptive use rate for these six villages from the beginning of the project. Three surveys were done to determine the percent of fertile married women who were actively using contraceptives. The first was done before any contraceptives were distributed by CRL, showing a very low rate of 1.1% use. This rose to 16.2% three months after the initial contraceptive distribution. After this the contraceptive rate fell to about 14%, due mainly to discontinuation of oral contraceptives. In August 1976 injectables were offered and a special condom distribution was also conducted. This increased the rate to 20.0% at 12 months, fully one-third higher than other villages in the contraceptive area. Furthermore, the "contraceptive mix" has shifted to a very effective method rather than toward a less effective method (condoms).

Continuation Rates:

The initial acceptors of injectables totaled 173 in the first 6 months it was offered to the 1050 married fecund women. Women themselves chose the duration of the injection, either 6 months or 3 months. 103 (60%) chose the 6 month injection and 70 (40%) selected the 3 month dose.

Continuation for the "3 month" acceptors was 87% through 6 months (48 of 59 eligible took a second shot) and remained at 87% through 9 months for 42 women. (All 24 eligible at 6 months took a third injection and another 18 had received a 6 month dose at 3 months).

The 103 "6 month" acceptors naturally had 100% continuation through 6 months, and 80% continued through 9 months (44 of 55 women eligible).

Reasons for Switch-over: Switch-over from three-month injection to six-month injection happened usually among the women who experienced comparatively less side effects and who did not wish further pregnancies. On the other hand, those who suffered from some problem or apprehended future side effects switched from the six month injection to the three-month injection.

Side-Effects: 40% of all three-month injection clients and 45% of all six-month injection clients reported experiencing at least one side effect at the two month visit following injection. The percentage for all pill users, as per findings of a study carried out after 10 weeks following the initial distribution of pills, was 62%. However, this difference may not be meaningful, as the recording of complaints was done quite differently for pill clients. As may be expected, side effects were more common among drop-out cases than among continuing users. The percentage reporting some side effects among drop-out cases was 82% for three-month injection clients, 70% for six-month injection clients and 76% for pill users.

Nature of Side-Effects: The most frequently reported side-effect for the 70 receiving three-month injections was dizziness (16%), followed by weakness (14%), cessation of menstruation (7%), heavy or prolonged bleeding (7%), and burning sensations in hands and legs (7%) (Table 2).

The most common side effect for 103 six-month injection clients was dizziness (25%), followed by weakness (16%), cessation of menstruation (16%), burning sensation in hands and legs (6%) and heavy or prolonged bleeding (3%).

In the case of 503 pill users, the most frequently reported side effects were dizziness (43%), followed by inter-menstrual bleeding (15%), prolonged or heavy menstrual bleeding (10%) and weakness (8%).

As may be expected, the findings revealed that cesaation of menstruation was comparatively more common among injectable clients than pill users, while inter-menstrual bleeding and prolonged or heavy menstrual bleeding was more common among pill users.

Treatment for Side-Effects: After 7 months 51 (29%) of the 173 injectable acceptors had used some of the oral contraceptive pills to control prolonged or heavy bleeding. 44 (84%) of these women were happy with the control provided by the pills. This seems an encouraging result for the treatment of this common side effect. The women had 7 pills for this use, and the dais were also instructed to provide this number if bleeding complaints recurred. Oral contraceptive users complaining of bleeding irregularities were also generally satisfied when treated by simply doubling the pills for 4 days. For cessation of menstruation, clients were instructed to take one tablet (Norinyl 1/50) daily for seven days, but no data has yet been available to predict the result.

In the case of dizziness, clients were initially assured that it would be alright after a few months. As per the experience of other programs tha advice of local Dais we are now instructing the clients to take cold drinking water or "Sorbath" for dizziness and burning sensation in hands and legs. The data is not yet available to tell the effectiveness of this treatment.

Pregnancy Outcome: No woman reported becoming pregnant after taking the injection. Three women received the injection hiding the fact that they were pregnant. They were declared disqualified for the second shot when the Field Assistant came to know about their pregnancy. Among three women, one had an abortion one and half months after the injection, another had twin still births 5 months after her injection and the other one was still carrying the pregnancy with no complications.

Some women, especially pregnant women, inquired from our Field Assistant whether the injection could cause abortion. He replied in the negative and informed them about MR facilities available at FRP clinic, Matlab.

Past Experience of Contraceptive use: About 46% of the injectable clients were active users of pills at the time of receiving first injection, another 23% were "ever users" of pill, 1% were active users of condom and 30% never used any birth control method.

Age and Parity of Clients: The median age of the 3-month injectable clients was 34 years and that of the 6 month injectable clients was 33 years. The mean parity for 3-month injectable clients was 6 and that for 6-month injectable clients was 6.5. This feature is essentially unchanged from the parity distribution seen when pills were the predominant method (Table 2).

DISCUSSION

The level of success achieved in these six villages may be due largely to the effort, personal talent, and dedication of the field worker directly involved. The constant (monthly) attention to problems may be in large part responsible for the high continuation rate and the high level of acceptability of injectables. Without this level of personal concern and follow-up the common bleeding problems and other side effects may have dampened the success considerably. We have not applied a similar intensive follow-up effort to any of the pill and condom distribution areas, and it is difficult to know if a similar level of contraceptive use could have been achieved.

We selected a Muslim male worker in order to test whether women would accept this method from men. All injections were given in the upper arm (Deltoid muscle) and this seemed to cause little concern to Muslim or Hindu women. However most were older, and we do not know if younger women would be more reluctant. The pain from 1 cc or 3 cc injection did not seem to be a deterrent.

SUMMARY AND CONCLUSIONS

While no definite conclusions can be drawn from these preliminary data, a relatively large number of women are using injectables without significant difficulty and the continuation rate is high in comparision to pill or condom use. The most common side effect is dizziness followed by weakness, for which no definite treatment is known to us. However, reassurance and simple home remedies may provide satisfactory care for most.

The next most frequently reported side effects are menstrual irregularities, including prolonged, heavy, frequent, irregular bleeding to light, frequent, spotting to complete cessation of menstruation. These side effects may largely be brought under control by the administration of a low dose oral contraceptive pill daily for seven days.

The injection method of contraception every 3 months or every six months among rural women of Matlab seems to be effective and acceptable. It can be used as a primary or a secondary method, with a minimum expenditure of time and professional personnel. It is especially useful as a "back-up" method for dissatisfied pill or condom users or for women who do not trust themselves to correctly use the pill. Likewise it would be a good intermediate method before sterilization can be provided.

Table 1

Contraceptive Use Rate for Married Fecund Women 15-44 in Villages Offered Injectable Contraceptives*, Matlab, Oct. 1975 - Nov. 1976

	Six Injectable Villages					
	Oct. 1975		Feb. 1976		Nov. 1976	
Women Contacted	1042		947		970	
Current Use:	No.	%	No.	%	No.	%
Oral Contraceptive	10	1.0	151	16.0	33	3.4
Condom			1	0.1	10	1.0
IUD			1	0.1	2	0.2
Injection		0.1			140	14.4
Sterilization			1	0.1	5	0.5
Others					4	0.4
Total	11	1.1	154	16.2	194	20.0

* Injectables (Depo-Provera) added in August 1976.

Table 2

Percentage of Women Reporting Symptoms Attributed Injectable Contraceptions, 2 Months After Receiving - Matlab October, 1976

Symptom	3 month injection (N = 70) %	6 month injection (N = 103) %
No side effects	60	55
Dizziness	16	25
Weakness	14	16
Inter-menstrual bleeding	4	2
Prolonged or heavy menstrual bleeding	7	3
Burning sensation (hand, legs, etc.)	7	6
Cessation of menstruation	7	16
Insomina	4	4
White discharge	1	3
Uneasiness	-	-
Pain (abdominal)	-	-
Nausea	-	-
Other	1	5
Total Percent*	121	135

* The summation of percentages exceeds 100 because some women complained of more than 1 symptom.

Table 3

Parity Distribution of All Contraceptive Users, Married Fecund Women Aged 15-44 Before and After Injectable Contraceptives* Offered, Matlab, February and November 1976

Users Parity	Six Villages Offered Injectables			
	February 1976		November, 1976	
	No.	%	No.	%
0-1	3	1.9	6	3.1
2-3	26	16.9	24	12.4
4-5	36	23.4	44	22.6
6-7	44	28.6	51	26.3
8-9	33	21.4	49	25.3
10+	10	6.5	17	8.8
Unknown	2	1.3	3	1.5
Total	154	100.0	194	100.0

* Injectables (Depo-Provera) added in August 1976.