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A prospective study of immediate initiation of depo medroxyprogesterone acetate contraceptive injection

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Abstract

Traditional protocols for depo medroxyprogesterone acetate (DMPA) initiation mandate that women start the method during the first 5–7 days of the menstrual cycle. Women who do not have their initial clinic visit during this time period are generally instructed to return to clinic during menses to begin DMPA, which often leaves them insufficiently protected from pregnancy. An alternative approach is to give women the injection immediately during the clinic visit, regardless of menstrual cycle day. In this prospective study, we evaluated a protocol for immediate DMPA initiation among 149 women who presented on cycle day 8 or later. Ninety-two percent ($n=137$) of subjects returned for a follow-up pregnancy test, but half of all subjects required multiple reminders to return for the visit. There were three pregnancies. Forty-seven percent ($n=70$) continued to a second DMPA injection or another contraceptive method within 14 weeks of their initial clinic visit. Factors associated with returning for repeat injection included satisfaction with DMPA, older age and finding it easy to return for the follow-up pregnancy test visit.

Keywords: Hormonal contraception; Injectable contraception; Depo medroxyprogesterone acetate; DMPA; Reproductive health services

1. Introduction

Initiation of depo medroxyprogesterone acetate (DMPA) according to product labeling (during cycle days 1–5) is beneficial in that it provides for immediate inhibition of ovulation and prompt contraceptive protection [1,2]. Furthermore, initiation during the follicular phase ensures that the woman is not already pregnant at the time of injection. Women who request DMPA are often unaware of the brief time period in which they may initiate usage. Since patients are generally discouraged from scheduling a gynecological appointment during menses, it is unlikely for a woman to be eligible for DMPA during her initial visit. Consequently, providers must frequently request that patients make an additional visit at the onset of their next menstrual period for the DMPA injection. Women may then not return for this visit because of waning motivation, inability to return to the clinic during the next menstrual cycle, or because of pregnancy that occurs while waiting for the next menses.

In the New York Presbyterian Hospital Family Planning Clinics, we generally initiate hormonal contraceptives using an approach called 'Quickstart'; women begin their chosen contraceptive method immediately during the clinic visit, regardless of menstrual cycle day [3–5]. Quickstart, however, has not yet been applied to DMPA initiation because of two concerns. First, women who receive DMPA after the early follicular phase can ovulate and become pregnant during that same cycle [2]. Second, women who initiate DMPA very early in a pregnancy (i.e., prior to a positive urine pregnancy test) may reasonably attribute their subsequent failure to menstruate to the DMPA injection; they may then experience substantial delay of pregnancy diagnosis. Such a delay would preclude first-trimester evaluation and treatment of these pregnancies.

We previously evaluated a novel DMPA initiation protocol for women seeking injection on cycle day 8 or later [6]. Women with negative pregnancy tests at baseline initiated a monthly hormonal contraceptive method during the clinic visit as an interim bridge to DMPA. Unfortunately,

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only 51% of study subjects returned for DMPA or another long-acting method within 1 month of the initial clinic visit, suggesting that this modified DMPA protocol was not particularly useful for increasing the proportion of women requesting DMPA who actually start the method.

In this study, we evaluated a protocol for DMPA initiation where women received the injection immediately during the clinic visit, regardless of menstrual cycle day, with a scheduled follow-up appointment a few weeks later. During follow-up, we diagnosed early pregnancies that were undetected at the time of enrollment. We also assessed the acceptability of initiating DMPA immediately during the initial clinic visit and the difficulties of recalling all subjects for a repeat pregnancy test shortly after initiation.

2. Materials and methods

This was a single-arm, open-label, prospective cohort study conducted at the New York Presbyterian Family Planning Clinics over a 5-month period in 2003. These clinics are funded, in part, by the New York State Department of Health and provide over 28,000 family planning visits annually. The clinic population is composed mainly of recent immigrants from the Dominican Republic; 80% of patients report incomes below the Federal poverty level.

Study inclusion criteria were as follows: requesting DMPA, being ≥18 years of age, being past menstrual cycle day 7 and not currently using a hormonal contraceptive method or intrauterine device. Patients seeking a repeat DMPA injection within 14 weeks of their previous injection were ineligible. All potential subjects underwent high-sensitivity urine pregnancy tests immediately prior to enrollment. Women reporting unprotected sex within 5 days received emergency contraception (EC), and all subjects received condoms and sexually transmitted infection risk-reduction counseling. Subjects were instructed to use condoms or abstain from sexual intercourse for 7 days after injection.

After the informed consent process, subjects completed an interview either in English or Spanish in order to collect information about sexual history, recent menstrual history, and past contraceptive use. Subjects received US$10 at the end of the visit, along with an appointment to return for a follow-up visit in 3–6 weeks. At follow-up, subjects underwent a repeat urine pregnancy test and completed an interview about their satisfaction with immediate initiation, condom use after enrollment, and satisfaction with DMPA. To ensure completion of the follow-up visit, all subjects received reminder phone calls 1–2 days prior to the scheduled appointment. In cases of missed appointments, repeated phone calls were made both to the subject and to contact persons identified by the subject at enrollment. We used clinic records to determine if subjects returned for repeat injection.

Data were analyzed using SPSS 10.0 (Chicago, IL, USA). Bivariate analyses were used to examine characteristics associated with returning for the follow-up visit as scheduled and for returning to the clinic for a repeat injection. Variables found to be significant in bivariate analyses were further analyzed using multiple logistic regression.

3. Results

One hundred fifty-two women requesting DMPA during the study period were enrolled in the study (Fig. 1). Only three women eligible for the study elected to wait until the next menses to receive their DMPA injection. Of those who were ineligible, 74% were within 14 weeks of their previous injection and 9% were in menstrual cycle days 1–7. Other reasons for ineligibility included current use of a hormonal method, being less than 18 years of age, and having a positive pregnancy test at baseline (data not shown). Three subjects were excluded post-enrollment; two who were less than 18 years of age, and one who was enrolled twice.

Study subjects were mostly young (median age, 22 years) Hispanic women, and most had previously used DMPA (Table 1). About 42% had less than a high school education, with 29% of those without a diploma or GED being currently enrolled in school (data not shown). Sixty percent were born outside of the United States, and of those

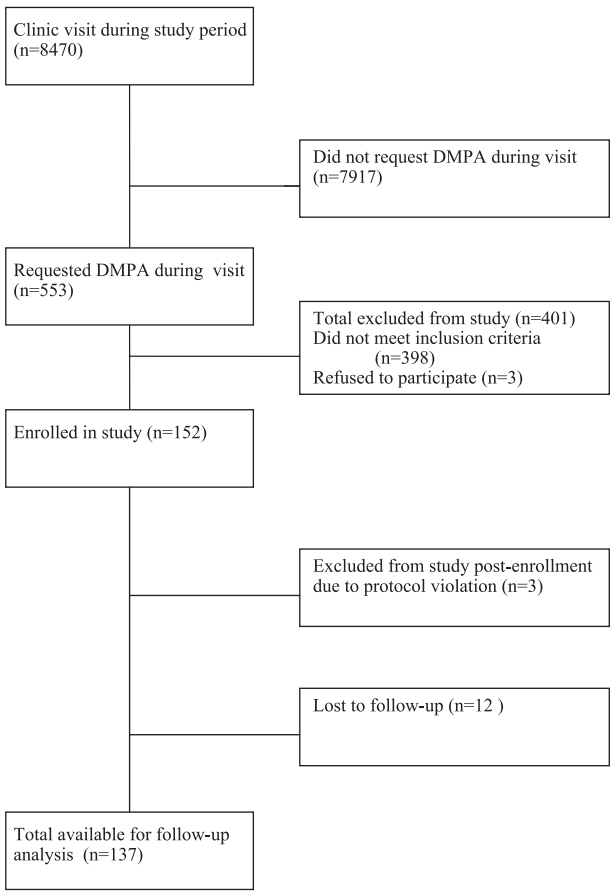

Fig. 1. Summary of patients presenting to an urban family planning clinic from July to December 2003.