ELSEVIER

Contraception 84 (2011) 280–284

Contraception

Original research article

Changing depot medroxyprogesterone acetate access at a faith-based institution☆

Maryam Guiahi[a,*], Moira McNulty[b], Gretchen Garbe[c], Sarah Edwards[d], Kimberly Kenton[c]

[a]Division of Family Planning, Department of Obstetrics and Gynecology, Columbia University, New York, NY 10032, USA
[b]Department of Internal Medicine, University of Chicago, Chicago, IL 60637, USA
[c]Department of Obstetrics and Gynecology, Loyola University Medical Center, Maywood, IL 60153, USA
[d]Trident Health System, Department of Family Medicine, Charleston, SC 29406, USA

Received 23 August 2010; revised 5 December 2010; accepted 6 December 2010

Abstract

Background: Loyola University Medical Center is a Jesuit faith-based hospital that previously offered immediate postpartum depot medroxyprogesterone acetate (DMPA) for noncontraceptive indications.
Study Design: We performed a historical cohort study comparing patients aged 25 years or less who received immediate postpartum DMPA versus women who did not. We used logistic regression to analyze associations between patient characteristics and repeat pregnancy within 1 year.
Results: There was a total of 258 women in our cohort: 105 (40.70%) exposed to DMPA. Majorities were non-Caucasian, unmarried, Catholic and received public insurance. Multivariable analysis, after adjusting for race and religion, shows a statistically significant decrease in repeat pregnancy for patients given immediate postpartum DMPA (OR 0.27, 95% CI 0.10–0.72).
Conclusion: Limits on access to DMPA for noncontraceptive indications during the postpartum period resulted in significant increases in pregnancy rates for adolescents and young adult women at this faith-based institution.

Keywords: Contraception; Access; DMPA; Faith-based; Catholic

1. Introduction

Almost half of all pregnancies in the United States are unintended [1]. The highest rates reported are among teenagers and young adult women less than 25 years of age who are unmarried, low income, black or Hispanic [1]. Evidence suggests that barriers to contraceptive access for adolescents in the US account for substantially higher pregnancy rates than teens in certain European countries [2]. Depot medroxyprogesterone acetate (DMPA) is a highly effective and convenient contraceptive method [3]. Studies have demonstrated the safety and appropriate use of postpartum DMPA in breastfeeding women and recent guidelines by the Centers for Disease Control and Prevention recommend the initiation of DMPA within the first postpartum month [4,5]. Postpartum administration of DMPA has been shown to be an effective way of decreasing repeat pregnancy for teenagers and young adults within 1–2 year(s) postpartum as compared to administration of oral contraceptive pills and/or transdermal steroid contraception [6–9]. DMPA injection at the time of a first trimester abortion also results in significantly lower rates of repeat pregnancies and abortions compared to other methods [10].

Loyola University Medical Center is a Jesuit faith-based center whose Catholic directives support natural family planning. Physicians at Loyola can counsel patients who have family planning needs about their options but cannot perform onsite procedures such as intrauterine device placement, sterilization or termination of pregnancy. Prescriptions or referrals for contraceptive methods may be given to patients who choose to obtain their contraceptive at an offsite location. Onsite administration of contraceptive methods can be considered for certain noncontraceptive and/or preventive indications. For example, clinical experience

☆ An earlier version of the abstract was presented as a poster presentation at the 58th annual American College of Obstetricians and Gynecologists Annual clinical meeting in San Francisco May 15-19, 2010.

* Corresponding author. Tel.: + 1 212 305 4938; fax: +1 212 305 6438.
E-mail address: mg2852@columbia.edu (M. Guiahi).

0010-7824/$ – see front matter © 2011 Elsevier Inc. All rights reserved.
doi:10.1016/j.contraception.2010.12.003

has shown that a number of conditions, particularly gynecological, improve or have a lower reported incidence in women who receive DMPA [3,11]. Before 2007, immediate postpartum administration of DMPA was offered to mothers with noncontraceptive indications at Loyola University Medical Center. In 2007, this practice came to the attention of the institution's administration and was subsequently discouraged. Women were instructed to delay initiation of DMPA for noncontraceptive indications until their six-week postpartum visit or alternatively obtain DMPA injections at an outside institution. Given that nonlactating mothers may resume ovulation as early as Day 33, we were interested in how delaying and/or limiting contraceptive access might impact pregnancy rates at this faith-based institution [12]. The primary goal of our study was to estimate the change in repeat pregnancy rates within the first postpartum year for women less than 26 years old who are at highest risk for unintended pregnancy. We hypothesized that by limiting access to DMPA for noncontraceptive indications, teenagers and young adult women may have increased rates of repeat pregnancies within the first postpartum year.

2. Materials and methods

We performed a historical cohort study of women delivering at Loyola University Medical Center. Women who received their first postpartum DMPA injection prior to discharge from the postpartum unit were classified as immediate postpartum administration and identified by examination of inpatient pharmacy records. The pharmaceutical log identified 200 female patients who received DMPA between January 2005 and December 2006. From this cohort, we excluded patients older than 25 years and/or those who did not receive DMPA immediately postpartum (i.e., in the emergency room or at clinic visit) from our final analysis. For our comparison group, we examined Loyola's master delivery log, and identified and randomly selected 160 women aged 25 years or less who delivered between May 2007 June 2008 when immediate postpartum DMPA administration was no longer permitted. We abstracted patient characteristics and post-delivery data from computerized hospital records. Available variables included age, race/ethnicity, marital status, body mass index [nonobese defined as body mass index (BMI) <30 vs. obese defined as BMI≥30], religion, insurance (public vs. commercial), parity prior to delivery, mode of delivery (vaginal vs. operative), attendance to postpartum visit (PPV) and contraceptive method selected and any pregnancies in the subsequent 12 months. If patients received DMPA, we examined the number of injections they received at this institution within the first postpartum year. We attempted to abstract data regarding the medical indication used for DMPA administration. We had no information regarding care provided outside of this medical center. We excluded women from both groups who did not have adequate demographic information. Institutional review board approval was obtained at Loyola University Medical Center.

Data were analyzed using SAS 9.2 (SAS Institute, Cary, NC, USA). We compared baseline characteristics of the groups using two-sided *t* test for continuous variables and chi-square for categorical variables. We compared proportions of repeat pregnancy by exposure to immediate postpartum DMPA as our primary objective and by exposure to multiple DMPA injections as our secondary objective. Univariable and multivariable logistic regression were performed to evaluate covariates for repeat pregnancy. We determined if any contraceptive method other than postpartum DMPA affected rates of repeat pregnancy. Results were considered significant at a p value of ≤.05.

3. Results

A total of 258 patients met criteria for final analysis: 105 exposed to immediate postpartum DMPA (40.70%) versus 153 not exposed (59.30%). Of the 200 patients who received DMPA, 66 (33.0%) were over the age of 25, 24 (12.0%) did not receive DMPA during the immediate postpartum time period and 5 (0.03%) had inadequate information or invalid patient identification numbers. Of the 160 women not exposed to immediate postpartum DMPA, 7 (4.4%) had inadequate demographic information. The mean age was 20.5 years and the majorities of patients were non-Caucasian, single, non-obese, received public insurance, Catholic, had their first delivery in the study period and delivered vaginally. Patients who received DMPA immediately postpartum were charted as "medically indicated"; however, the specific indication was missing from most charts and ultimately excluded from analysis. Excluding the women who received DMPA immediately postpartum (*n*=105) or at their PPV (*n*=4), 149 remained. Of these, 42.95% presumably received no method at our institution secondary to lack of follow-up (*n*=48) or no method given at their PPV (*n*=16). The most frequently selected contraceptive method during patients' six-week PPV was prescription for combined hormonal contraception; 25.5% oral contraceptive pills, 2.7% transdermal patch and 10.7% vaginal ring. Approximately 18% received a referral to an outside institution for either sterilization (*n*=1), intrauterine device (*n*=19), or DMPA (*n*=7).

Table 1 shows the characteristics of the cohort group by exposure to immediate postpartum DMPA. Women did not differ by age, marital status, BMI, parity prior to delivery, mode of delivery and attendance to PPV. Patients who received immediate postpartum DMPA were less likely to be Caucasian [OR 0.51, 95% confidence interval (CI) 0.28–0.94], Catholic (OR 0.56, 95% CI 0.33–0.95) and/or have commercial insurance (OR 0.44, 95% CI 0.21–0.88). Blacks were more likely (OR 2.06, 95% CI 1.24–3.41) to receive immediate postpartum DMPA compared to other races. We