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An updated assessment of postpartum sterilization fulfillment after vaginal delivery☆,☆☆,★

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Abstract

Objective: To describe sterilization completion rates after vaginal delivery and indications for unfulfilled procedures.
Study design: We used labor and delivery operating room and delivery logs to identify all women over 20 years of age with a completed live vaginal birth beyond 24 weeks gestation over a 33-month period (March 1, 2012 to November 30, 2014). We reviewed the electronic medical records of all of these patients and identified those who requested a sterilization procedure as indicated in a physician's admission note or antenatal record.
Results: We identified 3514 live vaginal births beyond 24 weeks gestation during the study period of which 219 requested postpartum sterilization. Sterilization occurred in 114 (52%). The most common reason for unfulfilled procedures was lack of valid federally mandated consent (n=46 [44%]). Fifty-nine percent (27 of 46) of these women had little or no prenatal care. Only one (0.5%) woman had documented completion of consent with the required time elapsed prior to delivery and no consent form available. Of the women with valid consent documentation, the most common indication for an unfulfilled procedure was patient refusal (n=30 [51%]). Body mass index was an independent predictor of an unfulfilled procedure ($p<.001$) among women with adequate consent.
Conclusions: Inability to complete federally mandated consent is a principal cause of unfulfilled postpartum sterilization and primarily affects women desiring sterilization who lack sufficient prenatal care. Of women who meet consent criteria, the primary reason women eligible for sterilization did not undergo the procedure was due to withdrawing their request.
Implications: Because women commonly do not undergo a requested sterilization after vaginal deliveries, antepartum counseling should include alternate contraception choices. Documented consent that fulfills all federally mandated criteria remains the most common barrier to requested sterilization after vaginal delivery; providers and policymakers should work together to help unburden women from this mandate.

Keywords: Sterilization; Postpartum; Tubal ligation; PPTL; BTL; Consent

1. Introduction

Female sterilization is used for pregnancy prevention by 25% of all contracepting women in the United States [1]. Sterilization within 48 h of vaginal delivery is effective, safe and convenient for many women [2,3]. However, a known barrier is the requirement for federally mandated consent that includes waiting periods for women seeking permanent sterilization. These forms can be unavailable at the time of delivery or not signed in time if the patient decided late in care to undergo such a procedure. The American College of Obstetricians and Gynecologists recommends that obstetricians identify and eliminate barriers to postpartum sterilization, many of which may be bureaucratic or institutional, including lack of operating room space or personnel, lack of mandated consent, or physician perception of ineligibility [3].

Electronic medical records can potentially prevent lack of availability of federally mandated consent documentation because forms can be scanned into the record; some networks even allow for sharing across institutions in real time. However, previously published evaluations of fulfilled postdelivery sterilizations commonly predate widespread availability of electronic medical records or use of such

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records to maintain consent documents [4–6]. In addition, many prior studies include women having a Cesarean delivery who consistently have significantly higher rates of completion of intended sterilization [4,6,7]. About 40–60% of women after vaginal delivery receive a planned sterilization procedure [4–7].

For those women who have adequate consent documentation, up to 50% do not undergo a planned procedure due to changing their minds [7,8]. In addition, lack of operating room space or unavailability of obstetric or anesthesia personnel can account for 10–33% of unfulfilled procedures [4–6,8]. Theoretically, ensuring timely operating room access for women desiring postvaginal delivery sterilization could minimize the risk of not undergoing a procedure due to lack of operating room personnel or a long wait during which time the patient may change her mind. In August 2013, the Department of Obstetrics and Gynecology at the University of California, Davis Medical Center (UCDMC) designated postpartum sterilization procedures as "non-elective," indicating their priority in the labor and delivery operating rooms as second only to urgent or emergent operative or Cesarean deliveries. The change occurred following quality review of a patient who had a delay of more than 2 days for a desired postvaginal delivery sterilization. At the time of the policy change, the department had not evaluated overall procedure completion rates.

We performed this retrospective descriptive study to determine the rate of fulfilled sterilizations and identify potential institutional barriers to this procedure such as lack of operating space, focusing only on women having a vaginal delivery. We compared women with adequate consent who did and did not undergo a sterilization procedure to look for specific variables that may predict an unfulfilled procedure at our institution. Secondarily, we evaluated whether this policy, which intended to improve operating room availability, decreased the interval from delivery to sterilization and changed the rate of unfulfilled postpartum sterilizations after vaginal delivery.

2. Materials and methods

We used labor and delivery operating room and delivery logs to identify all women over 20 years of age with a completed live vaginal birth beyond 24 weeks gestation from March 1, 2012 to November 30, 2014. This time frame represents the number of complete months before (18 months) and after (15 months) the policy change to achieve at least 50 postvaginal delivery sterilization procedures in each cohort. During this time period, the labor and delivery unit did not have any specified policies restricting availability of sterilization procedures based on date or time, other than the policy change itself.

We reviewed the electronic medical records of all of these patients and identified those who requested a sterilization procedure as documented in a physician's admission note or antenatal record. We evaluated these records for valid mandated consent documentation at the time of the delivery admission. In California, patients with medical assistance and federal insurance must undergo a 30-day waiting period and those with private insurance a 3-day waiting period between signing the mandated consent form and having the procedure. A single investigator (KKW) extracted patient demographics, gestational age at delivery, insurance status, day and time of delivery, use of labor epidural analgesia, sterilization rates, and reason for failure to attain a procedure from the electronic medical record into a secure spreadsheet. The University of California, Davis Institutional Review Board approved this study.

We used Fisher's Exact and chi-square testing as appropriate. We assessed predictors of obtaining a desired sterilization among women with valid consent documentation by performing a multivariable logistic regression with all patient characteristics as independent variables. We performed all analyses using SAS® software Version 9.4 (SAS Institute, Cary, NC, USA) and considered a p-value of less than .05 as significant.

3. Results

We identified 3514 live vaginal births beyond 24 weeks gestation at UCDMC during the study period. Overall, 219 women requested sterilization per the medical record, including 108 of 1799 (6.0%) women before and 111 of 1715 (6.5%) women after the policy change. The characteristics of the study population are presented in Table 1. Women without valid consent documentation were more likely to be young (<30 years old) or have public insurance and less likely to have an epidural anesthetic during labor as compared to women with valid consent forms.

Postvaginal delivery sterilization occurred in 114 (52.1%) women. Surgeons performed the majority of completed procedures within 24 h of delivery (79.8%), with similar proportions before (43 of 54, 79.6%) and after (48 of 60, 80.0%) the policy change (p=.96).

The reasons for an unfulfilled procedure are presented in Table 2. We did not encounter more than one reason documented for failure of a procedure to be performed, but six charts had no reason indicated. The most common reason for unfulfilled procedures was lack of valid consent forms, inhibiting 46 (21.0%) women from considering sterilization after delivery and accounting for 43.8% of all unfulfilled procedures. Twenty-seven (58.7%) of these women (23 of whom were having their third through ninth child) had scant or no prenatal care and stated that they desired sterilization upon or after admission. Eleven (23.9%) women, primarily cared for by providers not in our department or institution, had sterilization counseling and consent documents signed too late to meet the state-mandated waiting time; of note, one of these women changed her mind about sterilization upon admission regardless of her invalid consent. Seven (15.2%)