

van Vlijmen E, Brouwer J, Veeger N, Eskes T, de Graeff P, van der Meer J. Oral contraceptives and the absolute risk of venous thromboembolism in women with single or multiple thrombophilic defects. Results from a retrospective family cohort study. *Arch Intern Med.* 2007;167:282–289.

### Q. Are oral contraceptives safe for women with a thrombophilic defect?

**A.** No. In this retrospective family cohort study from the Netherlands, women who had protein S, protein C, or antithrombin deficiency had a greater baseline risk of venous thromboembolism (VTE), and the risk increased when they used combination oral contraceptives.

#### EXPERT COMMENTARY

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This report confirms the greater risk of VTE in women with protein S, protein C, or antithrombin deficiency, compared with unaffected women. When they used oral contraceptives (OCs), women with 1 or more of these deficiencies had 10 times the risk of VTE that unaffected women had. And when they had additional thrombophilic deficiencies—such as a second deficiency of protein S or C or antithrombin; factor V Leiden; or prothrombin G20210A—their risk of VTE was further amplified.

Because women with thrombophilic deficiency have a higher baseline risk of VTE, they developed VTE while taking OCs—or during pregnancy, another high-risk setting—at a younger age than their non-OC-using or nonpregnant counterparts, but the overall incidence of VTE during their reproductive years did not increase.

#### Family cohort framework facilitated study of rare mutations

A retrospective family cohort study is a good design to control for events in similar populations with relatively rare

mutational occurrences. This study was adequately powered for its major observations, but lost power and significance when it focused on women with multiple thrombophilic deficiencies. Nevertheless, it confirmed the greater risk of VTE with OC use in thrombophilic women, and clarified the absolute risk of VTE over a woman's reproductive life, which remains fairly stable because women with thrombophilic deficiencies are at such high risk to begin with.

The study also demonstrated that women with a thrombophilic deficiency have a high risk of multiple deficiencies.

#### Findings may not be applicable to women with other deficiencies

When a woman has a deficiency other than protein S, protein C, or antithrombin, these findings may not be valid. For example, factor V Leiden mutation is strongly associated with VTE in OC users. It is unclear whether the observation of a stable absolute risk of VTE in OC users would have held up if factor V Leiden was one of the major deficiencies studied.

#### Bottom line: Pay attention to the family history

This study highlights the importance of a good family history. Women who have family members known to have a thrombophilic deficiency should avoid OCs or be tested for all deficiencies and given oral contraceptives only if they prove to be free of deficiencies. These tests are very expensive and are not cost-effective in a general population screen.

#### FAST TRACK

**Women with a thrombophilic deficiency who used OCs developed VTE at a younger age than their non-OC-using counterparts**

CONTINUED

Declercq E, Barger M, Cabral HJ, et al. Maternal outcomes associated with planned primary cesarean births compared with planned vaginal births. *Obstet Gynecol.* 2007;109:669-677.

## Q. Is planned primary cesarean as safe as vaginal delivery for the mother?

**A.** Not according to this analysis of data from Massachusetts. It found that women who planned primary cesarean delivery were 2.3 times more likely to be rehospitalized within 30 days than were women who planned vaginal delivery.

### EXPERT COMMENTARY

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**Mary E. D'Alton, MD**, Chair, Department of Obstetrics and Gynecology, Columbia University Medical Center, and Chief of Obstetrics and Gynecology, New York-Presbyterian Hospital of Columbia University. Dr. D'Alton chaired the State-of-the-Science Panel on Cesarean Delivery on Maternal Request sponsored by the National Institutes of Health in March 2006.

Declercq and colleagues utilized a state-based data system linking birth certificates, fetal death records, and birth-related hospital discharge records from 1998 to 2003. Their study included 244,088 women (240,754 planned vaginal deliveries and 3,334 planned cesareans) with no previous cesarean and no documented prenatal risk.

Annually, about 1.2 million American women deliver by cesarean section, the most commonly performed major abdominal surgery in the nation. Yet we know surprisingly little about the phenomenon of women requesting cesareans without a medical or obstetric indication. There is no question that cesarean delivery on maternal request (CDMR) is a topic of great controversy. Despite considerable interest in the subject, there are very few data to guide practitioners.

### The difficulty of comparing planned cesarean and vaginal deliveries

This study has several limitations, which are acknowledged by the authors:

- Data derived from hospital discharge records and birth certificates have limitations. The 2 groups compared in this study were reconstructed from hospital records, and the planned mode of delivery was determined retrospectively. For these reasons, the planned primary cesarean group may be an inaccurate measure and oversimplification of maternal request.
- The cesarean delivery rate in the planned vaginal birth group was low at 8.7%, compared with the overall national primary cesarean rate of 20.6% in 2004.<sup>1</sup> This suggests that the selection of patients for inclusion in this study may have been subject to bias.
- Using an intent-to-treat analysis, the authors included women with planned vaginal birth who delivered via unplanned primary cesarean section, but failed to include the converse: women with planned cesarean delivery who presented in labor. Although mothers with labored cesareans constitute a small group, they are known to be exposed to higher complication rates than are women with unlabored cesareans.
- The primary reason for hospitalization was wound infection, and this study did not adjust for other important confounders for this complication, such as obesity.

### In general, findings do not change those of the NIH panel on CDMR

This study highlights the paucity of literature on CDMR and the need for better prospective data. In a state-of-the-science conference on CDMR, sponsored by the National Institutes of Health in March 2006, a systematic review of the literature

### FAST TRACK

**Women who planned cesarean delivery were 2.3 times more likely to be rehospitalized within 30 days**

found weak evidence supporting a lower infection rate with vaginal delivery, compared with planned or unplanned cesarean.<sup>2</sup> In our view, the study by Declercq and colleagues does not change the weak nature of evidence, but corroborates the impression of many practitioners that, in general, cesarean delivery is associated with higher rates of infectious morbidity than vaginal birth.

Although rehospitalization remains an important complication of cesarean section, the choice of delivery method is complex and involves numerous other factors such as ethics, fetal and neonatal morbidity, cultural background, professional resources, concerns about pelvic floor injury, and the risk of abnormal placentation in future pregnancies.

**Bottom line: Individualize the decision**

When a patient inquires about CDMR, the practitioner should carefully individualize the decision consistent with ethical principles and informed consent, while taking into account the available medical and health resources and the patient's preferences. Unfortunately, there is little clear guidance we can offer women considering CDMR because there are major gaps in our information.

Sorely needed is a comprehensive, nationwide research effort to more precisely understand the risks and benefits—for both mother and child—of cesarean delivery on maternal request as compared with both planned vaginal delivery and medically advised cesarean section. We owe the women and children of this nation nothing less. ■

**References**

1. Martin JA, et al. Preliminary births for 2004: infant and maternal health. National Center for Health Statistics, Centers for Disease Control and Prevention. Available at [www.cdc.gov/nchs/data/hestat/prelimbirths04health\\_tables.pdf](http://www.cdc.gov/nchs/data/hestat/prelimbirths04health_tables.pdf). Accessed April 12, 2007.
2. National Institutes of Health State-of-the-Science Conference statement: cesarean delivery on maternal request, March 27–29, 2006. *Obstet Gynecol*. 2006;107:1386–1397.

***FAST TRACK***  
**When a patient requests cesarean delivery, individualize your response in line with ethical principles and informed consent**

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**in June**

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