Factor V Leiden carriers taking oral contraceptives have an increased risk of thrombosis

TO THE EDITORS: I read with great interest the article, Factor V Leiden carriers taking oral contraceptives have an increased risk of thrombosis, published in the Journal this January, in which the authors discuss the risk of cardiovascular events in women taking combined oral contraceptives.[1] In effect, the use of oral contraceptives (OCs) has been associated with an increased risk of thrombosis.[2]

In the aforementioned Journal article,[1] the authors report some clinical circumstances that may increase this risk, among which they cite smoking in women 35 years old or older and women with a history of ischemic heart disease or stroke, hypertension, diabetes, and dyslipidemia.[1]

It strikes us that among these risk factors the authors do not cite carriers of factor V Leiden because it is known that the presence of this thrombotic risk factor may increase the possibility of thrombotic events in women taking contraceptives.[3]

Moreover, the prevalence of factor V Leiden in the European population is about 5%, ranging from 0.6% to 13.0%, and the prevalence of factor V Leiden carriers among white patients with deep venous thrombosis varies between 11.2% and 37.0%,[4] so the possibility of overlap between female factor V Leiden carriers and the intake of contraceptives could be common.

For this reason, we have raised the question of whether it would be reasonable to perform screening for factor V Leiden before oral contraception.[5] One of the arguments against screening for factor V Leiden to prevent secondary thrombotic events in women taking OCs is the economic cost. We evaluated this and concluded that screening for factor V Leiden may be recommended in women who are going to begin OC treatment if they have had previous thrombotic events or a family history of thrombosis.[5] ■

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REPLY

We appreciate the interest that Drs Aznar and Cerdá have expressed in our Clinical Opinion piece. We did not intend to minimize the importance of factor V Leiden as a risk factor for venous thromboembolism (VTE) in women taking combined oral contraceptives (COCs). However, we primarily addressed the risks of myocardial infarction (MI) and ischemic stroke (IS), which are arterial thrombotic events, with COCs. Accordingly, we cited some well-established risk factors for MI and IS, and we suggested that tools such as the Framingham risk calculator may be helpful adjuncts to American College of Obstetricians and Gynecologists (ACOG) and World Health Organization (WHO) guidelines by allowing physicians to estimate the attributable risk of COC-related cardiovascular events such as MI and coronary death.

Regardless, the correspondence from Drs Aznar and Cerdá raises an important but controversial issue: factor V Leiden may possibly be associated with an increased risk of arterial thrombosis.[1] However, available data are mixed, and any increase in arterial thrombosis risk (if present) is likely modest at worst,[1] in contrast to VTE risks, which appear to be substantially higher. Furthermore, it remains unclear precisely how factor V Leiden influences COC-related risks of MI and IS; for example, the apparent risks of COC-associated MI were not influenced by factor V Leiden in 1 study.[2] For these reasons, our current opinion is that factor V Leiden cannot be reliably incorporated into formal risk assessments for arterial thrombosis in those taking COCs.

Dr Aznar suggested that, based on a previous analysis of VTE risks,[3] screening for factor V Leiden before COC use is reasonable in women with a personal or family history of VTE. We agree with WHO and ACOG guidelines that COCs should be avoided in women at high risk for COC-related VTE (eg, personal history of VTE, known thrombophilia). Of interest, the WHO guidelines suggest that a family history of VTE is not generally a contraindication to COC use, and neither guideline endorses routine screening for factor V Leiden. Although we cannot fully engage this controversial topic herein, we respectfully offer the following comment: because reducing the risk of unwanted pregnancy can at least partially offset the risks of VTE with COCs, screening for factor V Leiden in subjects at intermediate risk of VTE (eg, a history of VTE in a first-degree relative) may be more easily justified when using COCs for noncontraceptive indications, especially those associated with subfertility. ■