Uterine Artery Doppler and Changes in Endothelial Function Before Clinical Disease in Preeclamptic Women

To the Editor:

Khan et al\(^1\) screened women for increased risk of preeclampsia using uterine artery Doppler waveforms at 18 to 20 weeks gestation. However, at this gestational age a high proportion of the abnormal waveforms may still normalize. Bower et al showed that 16% of 2058 unselected women had abnormal flow velocity waveforms at 18 to 22 weeks gestation versus 5.1% at 24 weeks gestation,\(^2\) and the persistent-notching is strongly predictive of early onset preeclampsia.\(^3\) Although Khan et al did not perform this 2-stage Doppler screening, they stated that there were no significant differences in vascular responses to acetylcholine and sodium nitroprusside between women with normal and abnormal Doppler waveforms at any time point. Conversely, they observed that microvascular responses for acetylcholine and for sodium nitroprusside were augmented in women in whom preeclampsia subsequently developed compared with those in normotensive women. Actually, they compared preeclamptic women of whom 73% (11 of 15) had preterm preeclampsia with 18 to 20 weeks gestation notching and an unknown but probably high proportion of persistently abnormal Doppler waveforms\(^1\) to normal women with an unknown but probably low proportion of persistently abnormal Doppler waveforms.

The investigation of the potential sensitivity of the microcirculation to NO in these preeclamptic notched patients (which cannot really be extrapolated from this work) would have been of much interest because several studies reported the improvement of abnormal uterine artery impedance with NO donors in preeclamptic women and support the hypothesis of NO deficiency in these women.\(^4,5\)

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