overestimated. Therefore, we believe that adjusting their findings or rephrasing their conclusions is necessary to improve the study.

Myounghwan Kim, MD, PhD
Jin-Sung Yuk, MD, PhD
Department of Obstetrics and Gynecology
Sanggye Paik Hospital
School of Medicine
Inje University
Seoul, Republic of Korea
cnnbs@naver.com
The authors report no conflict of interest.

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Reply: The risk of pelvic organ prolapse after hysterectomy

We thank Drs Kim and Yuk for their interest in our study.1 They drew attention to the composition of subgroups and the inclusion of women who underwent laparoscopic-assisted vaginal hysterectomy (LAVH) in our subgroup analysis. The reasons for this were as follows:

1. LAVH has not been well defined during 1977 to 2018 and includes a variety of surgical techniques, especially in earlier years.
2. In Denmark, LAVH was often performed when anatomic conditions did not allow vaginal hysterectomy; therefore, the anatomic predisposition for pelvic organ prolapse (POP) may not occur for women undergoing LAVH.

We reiterated the subgroup analysis, excluding women undergoing LAVH, and found virtually the same result as the article (hazard ratio: 1.6 [95% confidence interval (CI), 1.0–2.5] vs 1.5 [95% CI, 1.0–2.4]).

Drs Kim and Yuk claimed that a logical conclusion of our study would be that total hysterectomy and subtotal hysterectomy are unrelated to POP. However, even though statistical significance is not reached for the subgroups of hysterectomy, we see a clear tendency of association between the respective hysterectomies and subsequent POP. We believe it is highly probable that a type 2 error causes the insignificance. To date, we are working on a study that includes nulliparous and parous women, and this larger cohort will enable firmer conclusions on surgical routes separately.

Drs Kim and Yuk stated that if POP was present in a patient before study selection, they should have been excluded from the target group or adjusted in the analysis. We agree that this is an important issue, which we have considered carefully. Mild uterine prolapse is common; thus, we expect high numbers in both the hysterectomy and the reference group. However, the problem is that women are only diagnosed if they are seen by a gynecologist at a hospital. Therefore, the women in the hysterectomy group are more likely to be diagnosed with POP, which would skew the adjustment. Similarly, excluding all women with previous POP would create a falsely healthy population of women undergoing hysterectomy.

Lastly, Drs Kim and Yuk led our attention to pessary use. Unfortunately, we do not have valid information about pessary use. Thus, we cannot preclude that this would slightly affect the results. We appreciate this addition to the limitation of our study.

Karen R. Husby, MD
Department of Obstetrics and Gynecology
Herlev and Gentofte University Hospital
Borgmester Ib Juuls Vej 1, 2730 Herlev
Copenhagen, Denmark
Faculty of Health and Medical Sciences
University of Copenhagen
Copenhagen, Denmark
karen.ruben.husby.02@regionh.dk

Kim O. Gradel, DVM, PhD
Center for Clinical Epidemiology
Odense University Hospital
Odense, Denmark
Research Unit of Clinical Epidemiology
Department of Clinical Research
University of Southern Denmark
Odense, Denmark

Niels Klarskov, MD, DMSc
Department of Obstetrics and Gynecology
Herlev and Gentofte University Hospital
Copenhagen, Denmark
Uterine and umbilical artery Doppler combined with placental growth factor assays for placental function expertise in the assessment of fetal growth restriction

TO THE EDITORS: We read with great interest the article by Agrawal et al1 who assessed “the diagnostic performance of serum measurements of placental growth factor” in relation to placental pathologies. However, the objective of determining trajectories specific to different placental lesions according to Doppler analysis of the uterine artery flow (UtAD) in a wide variety of settings, is a challenge. Indeed, the use of angiogenic factor assays in clinical practice was rapidly spreading in the period between 2017 to 2021, from suspected preeclampsia to any suspected risk of placental dysfunction (PD), hypertensive disorders of pregnancy, or fetal growth restriction (FGR)”. Because of this great variability—both in the clinical context and in the underlying placental disease—the large overlap of UtAD findings and/or placental growth factor values between identified placental pathologies, cannot allow diagnostic or prognostic conclusions clear enough to support decision-making.

In actuality, a strong prediction of the classic “physiologic changes” in the uteroplacental vessels and, in their absence, of the development of histologic features of maternal vascular malperfusion1 can be obtained with good accuracy using UtAD.2 Among 645 high-risk pregnancies, Li et al1 reported that the incidence of abnormal UtAD was found in 77.6%, and 73.9% were those who gave birth to a newborn whose birth-weight was less than the third percentile and among those who developed pre eclampsia. The authors also showed that increasing UtAD impedance or bilateral notching closely correlates with adverse perinatal outcomes ($P<0.001$).3 Seven fetal deaths occurred; in 5 of these cases, high pulsatility index and increasing UtAD impedance or bilateral notching closely correlated with adverse perinatal outcomes ($P<0.001$).3 Seven fetal deaths occurred; in 5 of these cases, high pulsatility index and bilateral notching coexisted bilaterally at 23 to 24 weeks’ gestation after UtAD, of which in 3 cases, absent or reversed end-diastolic flow measurements in umbilical artery Doppler was associated with abnormal UtAD. In the setting of FGR and/or preeclampsia at <32 weeks, Herraiz et al4 have specified the respective roles and benefits of velocimetry and these biomarkers for the assessment of PD. In a series of high-risk patients with FGR at <32 weeks’ gestation, they reported that almost half of them developed preeclampsia, all of them with PI GF/sFlt-1 ratio ≥200 between 8 to 14 days before delivery, PI GF/sFlt-1 ≥655, and PI GF <50 pg/mL within the last 48 hours before delivery. After identifying placenta-related FGR through serial measurements of these biomarkers, this approach allows for more intensive maternal-fetal monitoring and optimizes the delivery dates of these very premature neonates, thanks to a timely prenatal corticosteroid treatment for fetal maturation and possible magnesium-sulfate therapy for neuroprotection.

The authors report no conflict of interest.

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