Study disputes link between uterine fibroids and miscarriage risk

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A 10-year study, led by Vanderbilt University Medical Center professor of Obstetrics and Gynecology Katherine Hartmann, M.D., Ph.D., disrupts conventional wisdom that uterine fibroids cause miscarriages.
The results of study appear June 7, 2017 in the *American Journal of Epidemiology*.

"We find women with fibroids are not at increased risk of miscarriage," said Hartmann. "Women with fibroids had identical risk of miscarriage as women without fibroids when taking into account other risks for pregnancy loss. We were stunned."

Fibroids are common benign uterine masses that can distort the external and internal contour of the uterus. Changes in uterine architecture and other local effects of fibroids have been implicated in prior research as a risk factor for miscarriage, said Hartmann.

"This is great news for women. Our results challenge the existing paradigm and have potential to reduce unnecessary surgical intervention," she said.

The study, "Prospective Cohort Study of Uterine Fibroids and Miscarriage Risk," included women from eight urban and suburban communities in three states to achieve a racially diverse cohort of women planning pregnancies or in the early weeks of pregnancy. Each woman in the Right from the Start study had a standardized ultrasound for fibroids to determine presence, number, size and location in the uterus.

Investigators from Vanderbilt, University of North Carolina-Chapel Hill and the National Institutes of Health (NIH) National Institute of Environmental Health Sciences, accrued the largest prospective cohort to date to investigate the association of fibroids with miscarriage, said Hartmann, the study's principal investigator.

Of the more than 5,500 women enrolled, ultrasound detected uterine fibroids in 11 percent, while 89 percent of the study participants did not
have fibroids. The chance for miscarriage in both groups was 11 percent.

"The key message is that fibroids don't seem to be linked to miscarriage," said Hartmann.

Hartmann admits the initial goal of the study was to understand which fibroids confer the highest risk of miscarriage in order to determine who might benefit most from surgery or myomectomy to remove the fibroids before a future pregnancy.

The authors explain their analysis likely reached different conclusions than other studies for several reasons: few earlier studies conducted ultrasounds for all participants to document fibroid status; no prior prospective cohorts took into account the influence of age and race. Age and African-American race/ethnicity are both associated with having miscarriages; and prior conclusions did not untangle these confounding factors, and fibroids were incorrectly blamed.

Hartmann said when all factors are taken into account, the surprising results of the study should give both women and care providers reassurance.

"More than 1 million miscarriages occur in the U.S. each year," she said. "Loss is remarkably common, but we know very little about the causes. When something bad happens in a pregnancy the first thing women look at is themselves, asking why it happened and what they could have done differently. Now women with fibroids have one less thing to worry about."

Provided by Vanderbilt University Medical Center