Less Surveillance Needed for Simple Ovarian Cysts

New study finds that simple cysts should be considered normal and ignored.

November 25, 2018 By Elizabeth Fernandez

Simple ovarian cysts are extremely common in women and do not require additional ultrasound surveillance or surgical removal, according to a new study of more than 72,000 women and close to 119,00 pelvic ultrasound exams over a dozen years.

The study, a collaboration between UC San Francisco and Kaiser Permanente Washington, found that simple cysts are normal, extremely common in both pre- and postmenopausal women, and aren't linked to a higher risk of ovarian cancer. As a result, unless they are symptomatic, simple cysts can be safely ignored, the researchers found.

By contrast, complex cysts or solid ovarian masses are far less common, but are associated with a significantly higher risk of developing malignant cancer, the authors report. These masses need to be followed or surgically removed.

The paper, published Nov. 12, 2018 in JAMA Internal Medicine, suggests a change in the way that simple cysts are typically monitored and sometimes treated.

"There's a great deal of unnecessary medical surveillance that goes on for simple cysts," said corresponding author Rebecca Smith-Bindman, MD, a UCSF professor in the Department of Radiology and Biomedical Imaging. She is also a professor in the departments of Epidemiology and Biostatistics and Obstetrics, Gynecology and Reproductive Medicine, and a member of the Philip R. Lee Institute for Health Policy Studies.

"Simple cysts are almost universally benign, but because of concern that they could harbor a cancer precursor, they have resulted in frequent surveillance and referrals to gynecologists and oncologists," she said. "Our study found that asymptomatic simple cysts of any size should be considered normal findings in women of any age and ignored."

Ovarian cancer is the fifth leading cause of cancer deaths among women in the U.S., with 22,000 new cases diagnosed and 14,000 deaths, annually.

In the last two decades, increased use of transvaginal pelvic ultrasound has led to frequent

identification of ovarian masses. While most of those masses are benign, researchers and professional guidelines have nonetheless recommended ongoing surveillance of simple cysts, due to the poor prognosis of malignant ovarian cancer, as well as concern over a small risk of cancer in masses that appear benign.

This is the first study to quantify the risk of ovarian cancer in a large, unselected population, based on the ultrasound characteristics of ovarian masses, including simple cysts. The authors sought to identify features that would predict with high certainty whether an ovarian mass was benign and would not require surveillance.

The study tracked 72,093 women who underwent pelvic ultrasound through Kaiser Permanente Washington between January 1997 and December 2008. Approximately 75 percent were less than 50 years old.

During the study period, the women underwent 118,778 pelvic ultrasound exams. Among the 54,452 women under 50, the researchers estimated that approximately 24 percent (12,957 women) were diagnosed with a simple cyst and none developed cancer during follow-up. Among the 17,641 women aged 50 and older, approximately 13 percent (2,349 women) were diagnosed with a simple cyst and only one was diagnosed with cancer.

In the statistical analysis, the risk of developing cancer was approximately zero in women with a simple cyst, regardless of the size of the cyst. The study identified 210 cases of ovarian cancer, nearly all of which were seen in women with complex cystic mass.

Ultrasound accurately predicted the probability of cancer, for which the odds significantly rose in women with complex cystic or solid ovarian masses, the authors said. They estimated that 6.5 percent of post-menopausal women with such masses will be diagnosed with ovarian cancer within three years. By contrast, women with simple ovarian cysts were not associated with a higher risk of cancer than those with normal ovaries. The authors acknowledged limitations, among them that women with a prior history of cancer were not included in the study.

“One of the justifications for the surveillance of simple cysts is that imaging may be inaccurate and might miss complex features,” said Smith-Bindman, a member of the UCSF Helen Diller Family Comprehensive Cancer Center. “This was not supported by our data. Cysts interpreted as being simple, even extremely large ones, were not associated with cancer.

“I understand why women and physicians do not want to mis-diagnose ovarian cancer,” she said. “Ovarian cancer is a devastating disease. But ovarian cancer does not arise in simple cysts and following simple cysts with imaging will not result in improved early detection of ovarian cancer.”

Authors: Co-authors are Liina Poder, MD, of the UCSF Department of Radiology and Biomedical Imaging; and Eric Johnson, MS, and Diana L. Miglioretti, PhD of Kaiser Permanente Washington Health Research Institute. Dr. Miglioretti is also a professor at University of California, Davis.

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