Medical Xpress

Breast cancer risk varies in young women with benign breast disease

December 14 2008

A type of benign breast disease (BBD) known as atypical hyperplasia substantially increases a young woman's risk of developing breast cancer, even if there is no history of breast cancer in her family, say researchers at Mayo Clinic.

The investigators, who presented their findings at the Cancer Therapy & Research Center-American Association for Cancer Research (CTRC-AACR) San Antonio Breast Cancer Symposium, say the women they studied with this kind of benign breast disease had a relative risk of developing breast cancer that was almost six times greater than women with no evidence of the disease.

Young women diagnosed with two other forms of benign breast disease were at much less risk than patients with atypical hyperplasia, the researchers say. Those with non-proliferative disease were only slightly at increased risk (1.2 times, or .2 percent higher than normal) and women with proliferative disease without atypia had a risk that was doubled. A family history of breast cancer increased risk in these two groups of patients, but only slightly, the researchers say.

"Breast cancer is the leading cause of cancer death in women age 25 to 49, and these young patients also have worse overall survival and increased risk of cancer coming back compared to older women, so it is important that we try to understand how the cancer develops and the measures that help prevent it," says the study's lead investigator, Karthik Ghosh, M.D.

The average age of benign breast disease diagnosis in the 4,460 women included in this study was 39 years old. Within that group, 326 women eventually - sometimes decades later - developed breast cancer.

The study is the latest set of findings in Mayo Clinic's effort to precisely define a woman's risk for developing breast cancer in order to tailor screening and risk-reduction measures to the individual. With support from a $5.8 million Department of Defense Congressionally Directed Medical Research Program, Mayo researchers have been studying benign breast disease in 9,376 women whose lesions were biopsied at Mayo Clinic between 1967 and 1991. The scientists continue to follow the progress of these women.

Their research has led to a number of findings, published in such journals as The New England Journal of Medicine, that are helping researchers predict which benign lesions will become cancerous. For example, they have found that in the entire benign breast disease cohort, women with atypical hyperplasia were more than three times more likely to develop breast cancer. They also found that risk decreases in women diagnosed with benign breast disease when the milk-producing lobular ductal glands - where cancer usually develops - shut down, a process known as lobular regression or involution.

In atyical hyperplasia, an increased number of cells line the milk duct or lobule, than is typical and the cells do not look normal under a microscope, but they are not cancerous, according to Dr. Ghosh. In proliferative disease without atypia, an increased number of cells line the milk duct but they look normal. Women with non-proliferative disease have fibrocystic changes but no increase in cell number.

This study was designed to look specifically at younger women in the group, because the earlier findings suggested these women were at increased risk of developing breast cancer, especially if they were

diagnosed with atypical hyperplasia. Among the group of 4,460 women less than 50 years old in the study, 2 percent had been diagnosed with atypical hyperplasia, 72 percent had non-proliferative disease and 26 percent had been diagnosed with proliferative disease without atypia.

Researchers found that after a median follow-up of 20 years, 326 of the women included in this study developed breast cancer. That meant the relative risk of developing the cancer was 1.5 times greater than women not diagnosed with BBD.

They further found that a strong family history of breast cancer was associated with a 2.2 times greater relative risk of cancer development in women with non-proliferative disease or proliferative disease without atypia.

They also found that the 5 percent of women who had complete lobular involution had a reduced relative risk (.68 times less) for developing breast cancer. "The impact of lobular involution on risk, even in young women with benign breast disease, is an interesting finding," Dr. Ghosh says. "It suggests that future research could potentially think about ways of promoting lobular involution as a means to reduce breast cancer risk."

Source: Mayo Clinic

Citation: Breast cancer risk varies in young women with benign breast disease (2008, December 14) retrieved 25 April 2024 from https://medicalxpress.com/news/2008-12-breast-cancer-varies-young-women.html