New drug treatment helps prevent early menopause in breast cancer patients

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Among young women treated for breast cancer, one of the most distressing side effects of chemotherapy is early menopause. But a major clinical trial has found that the risk of early menopause can be significantly reduced by adding a drug called goserelin to the chemotherapy regimen. Also, women who took goserelin and wanted to have children were more likely to get pregnant and deliver a healthy baby.

Results were released during the 2014 American Society of Clinical Oncology 50th Annual Meeting in Chicago. Kathy Albain, MD, of Loyola University Medical Center is senior author of the study.

The overall purpose of goserlin is to temporarily put the ovaries "at rest" during chemotherapy. "We found that, in addition to reducing the risk of early menopause, and all of the symptoms that go along with menopause, goserelin was very safe and may even improve survival," Albain said. "I think these findings are going to change our clinical practice."

The Phase 3 multicenter trial included premenopausal women younger than 50 who had certain types of early-stage breast cancer (estrogen and progesterone receptor negative). One hundred thirty-one patients were randomly assigned to receive standard chemotherapy and 126 were assigned to receive chemotherapy plus goserelin.

After two years, 45 percent of the women receiving standard chemotherapy had stopped menstruating or had elevated levels of a
hormone known as FSH, an indication of reduced estrogen production and egg supply. By comparison, only 20 percent of the women receiving goserelin had stopped menstruating or had elevated FSH. The pregnancy rate was nearly twice as high in the goserelin group (21 percent vs. 11 percent).

After four years, 89 percent of the patients who received goserelin showed no signs or symptoms of cancer, compared with 78 percent of those receiving standard chemotherapy. Overall survival at four years was 92 percent in the goserelin group and 82 percent in the standard chemotherapy group.

"Premenopausal women beginning chemotherapy for early breast cancer should consider this new option to prevent premature ovarian failure," Albain and colleagues concluded.

Goserelin (trade name, Zoladex®) is similar to a natural hormone made by the body. It is FDA-approved for prostate cancer, certain benign gynecological disorders and certain breast cancers.

Goserelin is administered by injection. In the clinical trial, women assigned to the goserelin group received one shot once every four weeks during the course of their chemotherapy regimen. Side effects of goserelin were uncommon, and mostly included more symptoms related to reducing the activity of the ovaries during chemotherapy.

About 25 percent of breast cancers occur in women younger than 50. Breast cancer chemotherapy can trigger early menopause in women in their 20s, 30s and 40s. After completing chemotherapy, some women resume menstruating and are able to have children should they choose to do so. But for many women following chemotherapy, menopause is permanent.
Chemotherapy-induced menopause tends to come on suddenly, and consequently, symptoms are much more intense. These symptoms include irregular periods and then cessation of periods completely; vaginal dryness; hot flashes; night sweats; sleep problems; mood changes; weight gain; thinning hair; dry skin; and loss of breast fullness. "Early menopause in younger breast cancer patients can be very debilitating," Albain said.

More information: The clinical trial is named "Prevention of Early Menopause Study (POEMS) S0230."

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