Oxybutynin decreased frequency of hot flashes, improved QOL for breast cancer survivors

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Treatment with oxybutynin helped reduce the frequency and intensity of hot flashes for women who could not take hormone replacement, including breast cancer survivors, according to results of a trial presented at the 2018 San Antonio Breast Cancer Symposium, held Dec. 4-8.

Hot flashes, a common symptom of menopause, can be more severe in breast cancer survivors than in the general public, said the study's lead author, Roberto A. Leon-Ferre, MD, assistant professor of oncology at the Mayo Clinic in Rochester, Minnesota. Several factors contribute to the increased severity in survivors: Chemotherapy may induce early menopause; antiestrogen medications, which are a major component of breast cancer treatment, may exacerbate hot flashes; and hormone replacement therapy, which is sometimes prescribed to treat hot flashes, is generally not recommended for breast cancer survivors.

"Hot flashes not only impact quality of life; they can also be associated with premature discontinuation of breast cancer treatment, which may increase the risk of breast cancer recurrence and mortality," Leon-Ferre explained. "Therefore, it's important to find effective options to treat hot flashes."

Previous research has indicated that hot flashes may be relieved with oxybutynin, an anticholinergic agent. This type of drug interferes with the activity of a neurotransmitter in the brain and in the peripheral

nervous system. It is most commonly used to treat urinary incontinence.

In this study, which is part of Academic and Community Cancer Research United (ACCRU), researchers sought to determine whether oxybutynin was more effective than placebo in treating hot flashes and in improving quality of life. The researchers enrolled 150 women who had experienced at least 28 hot flashes per week over more than a month, and who were bothered enough by them to want medication. Sixty-two percent of the women were on tamoxifen or an aromatase inhibitor for the duration of the study.

The women were randomly assigned to receive either 2.5 milligrams of oxybutynin twice a day for six weeks (Oxy2.5); 2.5 milligrams twice a day for a week, with a subsequent increase to 5 milligrams twice a day (Oxy5), or placebo. The women completed baseline and monthly questionnaires that tracked the frequency and severity of their hot flashes, resulting in an HF score calculated by the researchers.

The study showed that patients on both oxybutynin doses saw decreases in their HF scores compared with the women who took the placebo.

Patients in the Oxy2.5 arm had a mean change in HF score of -10.6, compared with -5.7 with placebo. They experienced an average of 4.8 fewer hot flashes per day, compared with 2.6 fewer hot flashes for the women in the placebo arm. Side effects for this group included diarrhea, dry mouth, dry eyes, episodes of confusion, and difficulty urinating, but were all mild in severity.

Patients in the Oxy5 arm had a mean change in HF score of -16.9, and they experienced an average of 7.5 fewer hot flashes per day. Side effects for this group included constipation, dry mouth, and difficulty urinating. The rate of discontinuation of oxybutynin due to side effects was low for both arms.

The women in both oxybutynin arms also reported improvement in work, social activities, leisure activities, sleep, and overall quality of life.

"This study, in addition to previously published work in this area, establishes that oxybutynin is an effective drug for treatment of hot flashes in patients who have relative or absolute contraindications to hormone-based therapy," Leon-Ferre said. "We were surprised by the rapidity of the response and the magnitude of the effect, considering the relatively low dose of the drug.

"The fact that oxybutynin does not interfere with the metabolism of tamoxifen is an important consideration for breast cancer survivors, as some of the most effective non-hormonal treatments for hot flashes are thought to potentially decrease the efficacy of tamoxifen," Leon-Ferre added.

Leon-Ferre said that since oxybutynin is already available for other indications, physicians could potentially prescribe it now off-label. However, Leon-Ferre said the study's primary limitation is that it did not address long-term toxicities of oxybutynin. Previous research has indicated that long-term use of anticholinergic drugs may be associated with cognitive decline. These possible side effects should be further researched and taken into consideration when counseling patients, Leon-Ferre said.

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