Vaginal Estrogen Increases Serum Estradiol

BY BRUCE JANCIN

SAN ANTONIO — Vaginal estrogens for treatment of atrophic vaginitis result in significant systemic absorption, leading to increased serum estradiol levels that are of concern in breast cancer survivors, a study indicates.

"All we can say now to patients is that the use of vaginal estrogens does increase the serum estrogen level. There isn't any information out there to say whether this is going to increase their risk of recurrence or not," Shannon Wills, Ph.D., said in presenting her study findings at the San Antonio Breast Cancer Symposium.

But that's a distinct possibility. It is well established that adjuvant aromatase inhibitors are more effective than tamoxifen at preventing breast cancer recurrences and they also drive serum estrogen levels lower, noted Dr. Wills of William Beaumont Hospital, Royal Oak, Mich.

She reported on the use of a highly accurate radioimmunoassay to measure serum 17-beta-estradiol levels in 24 postmenopausal women who had completed chemotherapy and/or local therapy for breast cancer. All of the women were on an adjuvant aromatase inhibitor or selective estrogen receptor modulator and had been using a vaginal estrogen for an average of 20 months to treat severe atrophic vaginitis. Fourteen women were using one vaginal estrogen tablet (Vagifem) inserted twice weekly, and 10 were using the vaginal estradiol ring (Estring), inserted every 3 months. Twenty-four postmenopausal breast cancer patients on adjuvant therapy who were not using vaginal estrogens served as controls.

Pre-insertion serum estradiol levels in the patients who were using vaginal estrogen tablets averaged 4.7 pmol/L—not significantly different than controls. Twelve hours post insertion, however, their average serum estradiol level was 76 pmol/L. One patient had a level of 300 pmol/L, and two others were in the 200 to 250-pmol/L range.

Pre-insertion serum estradiol levels in vaginal ring users averaged 14.2 pmol/L. Eight weeks post insertion, the average serum level was 30 pmol/L, with one patient having a level approaching 180 pmol/L.

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DR. WILLS

Previously, all 24 patients on vaginal estrogens had unsuccessfully tried all the other methods of improving atrophic vaginitis, Dr. Wills noted.

The session chair, Dr. Charles L. Loprinzi, asked Dr. Wills which type of product she'd recommend in these desperate situations—tablets or ring?

"I would have to say the vaginal tablets are probably a better option for the patient, based on our results," she replied. "The Estring had continuous absorption throughout the entire 3-month period. … With the vaginal tablets there appears to be a spike, then the serum level goes back down to baseline."

Dr. Loprinzi observed that vaginal dryness is a major problem for many postmenopausal women who haven't had breast cancer and even more of a problem for those who have, "if we ask about it."

The most exciting work in this area involves intravaginal dehydroepiandrosterone (DHEA) capsules (prasterone), said Dr. Loprinzi, professor of oncology at the Mayo Clinic, Rochester, Minn.

In a series of papers based on a recent phase III randomized, double-blind, placebo-controlled, 12-week clinical trial involving 216 postmenopausal women with vaginal atrophy, Dr. Fernard Labrie and workers at Laval University, Quebec, showed that intravaginal DHEA was effective for the treatment of vaginal atrophy (Menopause 2009;16:907-22), significantly improved the patients' libido and sexual function (pp. 923-31), and did so with no suggestion of an increase in serum sex steroid levels (pp. 897-906).

Dr. Wills reported having no conflicts of interest. ■