Testosterone therapy improves sexual function after uterus and ovary removal

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High doses of testosterone significantly improve sexual function among women who have had their uterus and ovaries surgically removed, a clinical study demonstrates. The results were presented Sunday at The Endocrine Society's 95th Annual Meeting in San Francisco.

Surgical removal of the uterus, or hysterectomy, and the ovaries, which is called oophorectomy, is performed to treat various diseases, including cancer. Hysterectomy is also performed as an elective sterilization, usually among older women, and may be combined with oophorectomy if ovarian disease is present. In cases of a family history of ovarian cancer, an oophorectomy of healthy ovaries may be performed in conjunction with hysterectomy to prevent future disease.

Since the ovaries produce the hormones estrogen and progesterone, which help regulate the menstrual cycle, their removal causes a drop in these hormones. A side effect of this sudden hormonal drop is a decreased interest in sexual activity, which can disrupt intimate relationships and affect quality of life.

There has been emerging interest in supplemental hormonal treatment with the primary male sex hormone, testosterone for disrupted sexual functioning in postmenopausal women.

To determine whether testosterone therapy increases sexual functioning among patients who have had hysterectomy and oophorectomy, study investigators recruited 71 women who had undergone these procedures. For the first 12 weeks of the study, participants received estrogen replacement. Investigators then randomly assigned them to one of five groups for weekly injections of placebo, or 3, 6.25, 12.5, or 25 milligrams (mg) of an intramuscular testosterone medication, called testosterone enanthate, for 24 weeks.

They found that sexual functioning significantly improved among the group of women who received 25 mg of testosterone compared to placebo. In addition, the weekly number of sexual encounters among this group increased by 2.7 encounters. These improvements were related to greater blood concentrations of free testosterone, which means that the hormone is more active because it is not bound to proteins in the blood. The groups receiving lower doses of the hormone, however, did not have improvement in sexual functioning.

"This study provides novel information about the range of testosterone doses associated with potential beneficial effects on sexual function in women," said the study's lead author Grace Huang, M.D., endocrinology fellow at Boston University Medical Center. "However, long-term studies are needed to determine whether these improvements in sexual function can be achieved safely without increasing risk for heart disease."

A primary concern with testosterone replacement therapy is that it can cause symptoms of masculinization among women. These symptoms include unwanted hair growth, lower voice tone, and increased muscle mass. Few of these side effects were reported in this study.

Investigators used hormonal tests to measure blood concentrations of both total and free testosterone. To assess sexual function, they used a standard questionnaire for women. Participants also completed weekly logs to document sexual activity.

Provided by The Endocrine Society