

## The clinical usefulness of anti-Mullerian hormone evaluation in breast cancer patients who are taking Tamoxifen

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In premenopausal, hormone receptor (+) breast cancer patients, anti-hormone therapy is very important therapy for preventing cancer recurrence. It is recommended for the patients, after taking Tamoxifen for five years, to either continue with Tamoxifen or change to the aromatase inhibitor, depending on their menopausal status. The important problem for clinicians is that a woman has no menses does not mean the woman is no longer producing estrogen, which could compromise the effectiveness of the aromatase inhibitor. So it is needed to know whether the woman was really in menopausal state or not.

The elevated serum follicle stimulating hormone (FSH) level may be helpful in confirming menopause. Mean serum FSH level increases with age and be significantly higher in the 40 to 50 years, the period of initiation of menopause. However, it is known that a woman administered with Tamoxifen usually has a tendency of low serum FSH level. Serum anti-Mullerian hormone (AMH) level may be more accurate indicator of menopausal status than serum FSH level in perimenopausal, hormone receptor(+) breast cancer patients who were treated with Tamoxifen for 5 years and were considered additional anti-hormone therapy.

We evaluated the perimenopausal women who were visited the survivor clinic in breast cancer department of Asan Medical Center between December 2014 and January 2016. All the patients had a surgery and were recommended to take Tamoxifen 20mg. Totally 46 perimenopausal women were enrolled and analyzed. The relationship between the presence of menopause and serum FSH and AMH levels was assessed using Pearson Chi-square test. We compared the relationship of the patient's biological menopause and laboratory menopause (serum FSH>30mIU/mL, serum AMH<0.08ng/mL). Statistically, menopause compared to FSH levels has no significant relationship. (p value: 0.157) but menopause compared the AMH levels has significant relationship. (p value: 0.017)

We concluded anti-Mullerian hormone can be accurate predictor of menopause than follicular stimulating hormone in perimenopausal, hormone-receptor (+) breast cancer patients who were treated with Tamoxifen.

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