http://dx.doi.org/10.35630/2023/XIIsc4hlth/111

# ULTRA-LOW DOSE ESTRADIOL PLUS DYDROGESTERONE TO PREVENT THE DEVELOPMENT OF ATHEROSCLEROSIS IN POSTMENOPAUSE

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## BACKGROUND

Active development of the "anti-aging medicine," attempts to slow down biological (including vascular) aging led to the creation of new pharmaceuticals including menopausal hormone therapy. The vascular wall protective mechanism of the hormones is not completely clear, but it was shown that natural estrogens are able to improve antithrombogenic activity of the vascular wall. There are publications indicating that standard and low-dose estrogen may restore the impaired antithrombogenic potential of the vascular wall, provided its initial reduction does not exceed 20%. The issue of the role and possibilities of correction of the antithrombogenic activity of the vascular wall with ultra-low dose estradiol remained unresolved.

*Purpose of the Study:*

To investigate the efficacy of ultra-low dose estrogen plus dydrogesterone to reduce relative risk of reduction of the antithrombogenic activity of the vascular wall.

## MATERIALS AND METHODS

As a "clinical model" for the study of this issue, we formed 2 groups of patients: in the study group patients received ultra-low dose estradiol plus dydrogesterone, subjects from the control group received beta-alanine. Green Climacteric Scale was used to evaluate the quality of life of the patients. Antithrombotic vascular wall activities were determined according to M.V. Baluda method [1].

## RESULTS

Menopausal hormonal therapy is an approved method for the correction of disorders in females with climacteric syndrome. The quality of life reflected by Green Scale points improved considerably following MHT application. Three-year follow-up showed a decrease in antithrombogenic activity of the vascular wall in control subjects after 2 and 3 years of follow-up according to the M.V. Baluda's test versus subjects treated with ultra-low dose estrogen plus dydrogesterone

The decrease of the relative risk of reduction of the antithrombogenic activity of the vascular wall with the use of ultra-low dose estrogen plus dydrogesterone during the first two years was 2.3 times, and during the 3 years of follow-up — 3.8 times versus control.

## CONCLUSION

Vascular wall endothelium has estradiol receptors, so menopausal hormone therapy can induce and activate the synthesis of antithrombogenic vascular wall activity factors on a cellular level. Prescribing only ultra-low dose estradiol plus dydrogesterone for patients with normal antithrombogenic activity of the vessel wall at baseline reliably lowers the risk of long-term reduction of antithrombogenic potential of the vascular wall and prevents the development of initial stages of atherosclerosis.

*Keywords:*

atherosclerosis, postmenopause, anti-aging medicine, menopausal hormone therapy.