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ATHEROSCLEROSIS AND MENOPAUSAL SYMPTOMS: BASELINE CHARACTERISTICS OF RECENTLY MENOPAUSAL WOMEN SCREENED FOR THE KRONOS EARLY ESTROGEN PREVENTION STUDY

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Objective: The cardiac effects of estrogen may depend on menopausal status. The Kronos Early Estrogen Prevention Study (KEEPS) is a placebo -controlled trial on the vascular effects of estrogen therapy initiated in early menopause. Declining estrogen levels (E2) lead to menopausal symptoms that can be ameliorated by exogenous therapy. Two validated measures of atherosclerosis are common carotid artery intima - media thickness (CIMT) and coronary artery calcification scores (CAC). Recently, higher endogenous E2 levels have been shown to predict lower CIMT in cycling women (Karim R, et al. J Clin Endocrinol Metab, 2008;93:131 -138). However, it is unknown whether the symptoms of estrogen deficiency are associated with atherosclerosis in recently menopausal women.

Design & Method: Menopausal symptoms of depression, insomnia, irritability, dyspareunia, hot flashes, mood swings, night sweats, palpitations, and vaginal dryness were recorded on a scale of 0 (none) to 4 (severe). Serum E2 concentrations were measured in pg/ml. CIMT was measured centrally by computer image -processed B-mode ultrasound and CAC was measured by CT or EBT. We correlated baseline CIMT and CAC with menopausal symptoms and estradiol levels in 772 women screened for the KEEPS trial.



KEEPS

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Results: The average age of women screened was 53.1 (42-58) with an average number of years in menopause of 1.45 (0.10 -3.10). The average menopausal symptom scores were: depression 0.49 (0-3), insomnia 1.07 (0 -3), irritability 0.81 (0 -3), dyspareunia 0.9 (0 -4), hot flashes 1.35 (0-3), mood swings 0.78 (0-3), night sweats 1.09 (0 -3), palpitations 0.34 (0-3), and vaginal dryness CIMT was 0.73 (0.53 -1.17). Neither menopausal symptoms nor E2 correlated with CIMT or CAC. Using Spearman's rho for non-parametric correlations, years of menopause was significantly associated with E2 -0.83 (p=0.023), CIMT 0.074 (p=0.48), dyspareunia 0.12 (p=0.002), and vaginal dryness 0.074 (p=0.43), but not with CAC or other menopausal symptoms.

Conclusion: Menopausal symptoms and E2 do not predict atherosclerosis in newly menopausal women. These results establish a baseline in the KEEPS; further studies of this population will investigate if menopausal symptoms predict atherosclerosis as menopause progresses or if hormone therapy alters the interplay between these clinical parameters.