

Arterio sclerosis of common carotid artery after menopause

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Objective We tried to elucidate the influence of menopause on atherogenesis

Methods A group of 72 postmenopausal women were classified into subgroups based on duration of the postmenopausal period (PMP): Group PM1 (1-2 years; n=16), PM4 (2-6 years; n=16), PM8 (6-10 years; n=25), and PM12 (10-15 years; n=15). The control group consisted of 24 volunteers with regular menstruation (PM0). The diameter pulse waveform and intima-media thickness (IMT) of the common carotid artery (CCA) was measured using a phase-locked echo tracking system coupled with B-mode ultrasonography. The stiffness index (SI) was calculated from the waveform and the systemic blood pressure. Blood was obtained to determine the fasting lipid profile, which was used as a reflection of the atherogenic state.

Results When compared to control, significant and progressive increases were noted in total cholesterol and low density lipoprotein (PM1, PM4, PM8, PM12), IMT (PM8, PM12), and SI (PM1, PM4, PM8, PM12). Further significant and progressive reductions were noted in pulse amplitude of CCA diameter (PM1, PM4, PM8, PM12) and MIV and cerebral perfusion (PM8, PM12).

Conclusion The postmenopausal increase in CCA stiffness and lipid profile occurs earlier than the increase in IMT and may be a more sensitive predictor of an accelerated atherogenic state.