Abstract

Maturitas. 2015 Jun;81(2):311-6. doi: 10.1016/j.maturitas.2015.03.012. Epub 2015 Mar 21.

Subclinical cardiovascular disease in postmenopausal women with low/medium cardiovascular risk by the Framingham risk score.

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Author information

Abstract

OBJECTIVES: To evaluate the prevalence of subclinical cardiovascular disease (CVD) and its association with clinical and hormone variables in postmenopausal women from Southern Brazil.

STUDY DESIGN: Cross-sectional study.

MAIN OUTCOME MEASURES: Coronary artery calcification (CAC) assessed by electron-beam computed tomography. Carotid intima-media thickness (IMT) and atheromatous plaques assessed using B-mode ultrasound. IMT was measured at three segments. Subclinical CVD was defined as the presence of plaque and/or IMT >0.9mm.

RESULTS: Ninety-seven postmenopausal women (mean age 55±5 years, median duration of menopause 5.8 [3-10] years) were studied. A low/medium Framingham risk score (FRS) was present in 97.9% of participants; 35.1% had subclinical CVD on carotid ultrasound, and 24.7% had the presence of plaque. Seven women had a CAC score ≥100, and two had a score ≥200. CAC score ($p<0.001$) and FRS ($p=0.013$) were higher in patients with subclinical atherosclerosis. Positive correlations were found between IMT and age ($rs=0.293$ $p=0.004$), duration of menopause ($rs=0.237$, $p=0.020$), and CAC score ($rs=0.468$, $p<0.001$). Common carotid IMT (IMT-CC) was negatively associated with estradiol levels ($\beta=-0.237$, $p=0.018$) and positively with age ($\beta=0.210$, $p=0.033$), and BMI ($\beta=0.260$, $p=0.010$). However, correlations with estradiol and age did not remain significant when adjusted for systolic blood pressure and LDL-cholesterol levels.

CONCLUSION: A high prevalence of subclinical atherosclerosis was detected in this sample of postmenopausal women with low/medium CV risk by the FRS. The association between IMT-CC and age or endogenous estrogen levels was dependent of blood pressure and LDL-cholesterol in these postmenopausal women from Southern Brazil.

KEYWORDS: Carotid intima–media thickness; Coronary artery calcification; Estrogen; Menopause; Subclinical cardiovascular disease

PMID: 25869902 [PubMed - in process]

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