

IMPACT OF MENOPAUSE ON CORONARY ARTERY CALCIFICATION EXAMINED BY ELECTRON-BEAM COMPUTED TOMOGRAPHIC SCAN

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BACKGROUND/AIMS: To examine whether there is a difference in impact on coronary artery calcification (CAC) scores between male and female aged above 50 years.

METHODS: A total of 465 subjects who met the following criteria were enrolled in this study: (1) age between 40 and 70 years, (2) Chinese, (3) without clinical or historical angiographic obstruction or arrhythmia, and (4) without family history of cardiovascular disease (CVD). Subjects were assigned to one of the electron-beam tomographic scan (EBTC) coronary artery calcification (CAC) scores categories according to quartiles: quartile 1 (<25%), quartile 2 (25% to 49%), quartile 3 (50% to 75%) and quartile 4 (>75%) for further assessment and comparison. The main outcome evaluated is the percentage of high CAC scores and means of CAC among age groups between male and female. Other measurements including blood pressure, BMI, fasting glucose, cholesterol and triglyceride were also analyzed.

RESULTS: This study demonstrated that the percentage increased markedly with age from 5% in the 40-49 age group to 21.2% in the 50-59 age group among females, but only slightly from 25% in the 40-49 age group to 31.2% in the 50-59 age group in males. Postmenopausal females had higher OR (4.3 times in the 50-59 age group and 13.4 times in the 60-70 age group) than males (1.6 times in the 50-59 age group and 3.1 times in the 60-70 age group).

DISSCUSSION/CONCLUSIONS: These initial findings seem to indicate that the CAC of females above 50 years old is more age-dependent than males of the same age, which might be due to the effect of menopause.

Key words: Postmenopause; Coronary artery calcification; Electron-beam tomographic scan