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**Prevalence of arterial stiffness evaluating by cardio-ankle vascular index (CAVI) in Thai rheumatoid arthritis patients comparing with sex-matched controls**

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**Introduction:** Rheumatoid Arthritis (RA) is an autoimmune disease which caused early death mostly from cardiovascular diseases. Previous studies demonstrated significantly increasing risks of subclinical atherosclerosis in RA patients compared to control group evaluating by several measurements, e.g. carotid artery intima-media thickness, ankle-brachial index.

**Objective:** To find the prevalence of arterial stiffness evaluating by abnormal CAVI in Thai RA patients comparing with sex-matched controls and to determine the correlation between abnormal CAVI and malondialdehyde (MDA) level and other factors that affected to abnormal CAVI.

**Method:** A cross-sectional study was performed in 48 RA patients and 51 sex-matched controls. Non-invasive vascular test, CAVI was measured and was classified as normal, borderline and abnormal. Other traditional risk factors or factors that could affect CAVI were also measured.

**Result:** Prevalence of arterial stiffness evaluating by abnormal CAVI in Thai RA and in sex-matched control were 18.8% and 17.6%, respectively. Polytomous age, dyslipidemia and sex-adjusted logistic regression model demonstrated significantly higher CAVI in RA than controls in borderline group ( $p=0.045$ ) but not in abnormal group ( $p=0.188$ ). There was no correlation between CAVI and MDA level. Mild disease activity was significantly related to high CAVI ( $p=0.031$ ). There was also significant correlation between CAVI and age ( $p=0.001$ ).

**Conclusion:** There was significantly higher CAVI in RA than controls in borderline group but not in abnormal group. Factors that are statistical and significantly associated with high CAVI were age and mild disease activity. Early detection of subclinical atherosclerosis in RA patients can be primary prevention for further cardiovascular complications.

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