Vessels and Endothelium

12.20 Cardio Ankle Vascular Index (CAVI) is Related to Pulse Wave Velocity and Augmentation Index

A. Milan (1), F. Tosello (1), S. Delcolle (1), M. Caserta (1), D. Naso (1), E. Puglisi (1), C. Magnino (1), A. Viola (1), F. Veglio (1)

(1)Università di Torino, Torino, Italy

Introduction. Cardio-Ankle-Vascular Index (CAVI) is a new index recently introduced able to evaluate arterial stiffness. It has been demonstrated that it is associated to coronary atherosclerosis. CAVI is relatively independent of blood pressure.

Aim. To compare CAVI with 'standard' arterial stiffness such as Pulse Wave Velocity (PWV) and Augmentation Index (Aix).

Methods. We evaluated 19 male middle age (mean $\pm$ standard deviation: 55.6 ± 10 years) hypertensive patients. Their blood pressure levels was SBP/DBP $140 \pm 16/87 \pm 8$ mmHg, heart rate 69 ± 12 mmHg. All the patients were evaluated with Vasera (Fukuda Deshi) and Sphygmocor in order to assess arterial stiffness by CAVI, PWV and Aix.

Results. CAVI value was similar to PWV (7.57 ± 1.6 vs. 7.33 ± 1.6 , $p = \text{NS}$): further, CAVI was significantly related to PWV ($r=0.52$ $p=0.02$ – figure) and to Aix ($r=0.56$, $p=0.01$), notably it was not associated to brachial or central blood pressure levels ($p=0.8$).

Conclusions. Cardio Ankle Vascular Index (CAVI) should be considered as a new index in the evaluation of arterial stiffness in hypertensive patients.