

[PP.35.172] OFFICE AND AMBULATORY HEART RATE AS MARKER OF ARTERIAL STIFFNESS

L. Garcia-Ortiz, A. Garcia-Garcia, E. Rodriguez-Sanchez, J.I. Recio-Rodriguez, C. Agudo-Conde, A. De Cabo-Laso, B. Sanchez-Salgado, J. Prieto-Mateos, P. Delgado-Benito, M.A. Gomez-Marcos. Primary Care Research Unit La Alamedilla, Salamanca-Spain

Objectives: To analyze the relationship between office and ambulatory heart rate, and its variability, and arterial stiffness in patients with primary arterial hypertension.

Methods: A cross-sectional study was conducted in a primary care setting, with the inclusion of 356 hypertensive patients aged 30–80 years. Office and ambulatory blood pressure and heart rate (HR) and the corresponding standard deviations, were determined. Arterial stiffness was assessed according to carotid intima media thickness, pulse wave velocity, the central and peripheral augmentation index (AIx), and the ambulatory arterial stiffness index (AASI).

Results: Carotid intima media thickness, central and peripheral AIx, and AASI were negatively correlated to office and ambulatory HR and its standard deviation, and positively correlated to the night/day HR ratio. Pulse wave velocity showed a negative correlation to 24 hours standard deviation HR and a negative correlation to nocturnal HR and the night/day HR ratio. For each 10 bpm increment in 24 hours HR, the pulse wave velocity increased 0.42 m/s (95%CI: 0.23-0.60) and AASI decreased 0.01 (95%CI: 0.01-0.02); in the case of office HR, the peripheral AIx decreased 4.74 (95%CI: 3.15-6.33) and central AIx decreased 3.52 (95%CI: 2.43-4.30), while for 24 hours standard deviation HR, carotid intima media thickness decreased 0.03 mm (95%CI: 0.01-0.06).

Conclusions: Office and ambulatory HR, and the corresponding standard deviations, are inversely associated to the arterial stiffness markers, with the exception of pulse wave velocity, where a direct correlation is observed. A lessened decrease in nocturnal heart rate is associated to increased arterial stiffness.

Citation: Garcia-Ortiz L., Garcia-Garcia A., Rodriguez-Sanchez E., Recio-Rodriguez J.I., Agudo-Conde C., De Cabo-Laso A., Sanchez-Salgado B., Prieto-Mateos J., Delgado-Benito P., Gomez-Marcos M.A. OFFICE AND AMBULATORY HEART RATE AS MARKER OF ARTERIAL STIFFNESS, *Journal of Hypertension*, Vol 29, e-Supplement A, June 2011, e480

Date: Monday, June 20, 2011

Session Info: POSTER SESSION 35: LARGE ARTERIES

[Close Window](#)