P8.07: AN OLD DOG WITH NEW TRICKS: URIC ACID LEVELS ARE ASSOCIATED WITH AORTIC STIFFNESS AND WAVE REFLECTIONS IN NEWLY DIAGNOSED, NEVER-TREATED HYPERTENSION


To cite this article: P. Xaplanteris, C. Vlachopoulos, G. Vyssoulis, I. Dima, K. Baou, K. Aznaouridis, N. Alexopoulos, C. Stefanadis (2009) P8.07: AN OLD DOG WITH NEW TRICKS: URIC ACID LEVELS ARE ASSOCIATED WITH AORTIC STIFFNESS AND WAVE REFLECTIONS IN NEWLY DIAGNOSED, NEVER-TREATED HYPERTENSION, Artery Research 3:4, 188–188, DOI: https://doi.org/10.1016/j.artres.2009.10.113

To link to this article: https://doi.org/10.1016/j.artres.2009.10.113

Published online: 14 December 2019
Objective: Which are aortic pulse wave velocity determinants in a diabetic population?

Methods: We studied 132 diabetic patients. They entered the day hospital to have their arterial stiffness measured. We measured brachial and central blood pressure, augmentation index, and pulse wave velocity (PWV). They also had extended biochemical tests.

Results: Among those 132 patients, 8% had type 1 diabetes and 92% had type 2 diabetes. Mean period of diabetes was 13 years. Treatments combined insulin (47%), biguanids (54%), acarbose (10%), sulfamids (31%), thiazoldinediones (11%), with 25 patients (19%) having both insulin and oral drugs. We compared patients with and without insulin, measured their PWV, and adjusted it to standard factors (age, gender, MAP, sex), but also to 3 time-related diabetes criteria (short term: plasma glucose; middle term: HbA1C; long term: insulin treatment).

Conclusion: Insulin treatment is the most powerful diabetes-related parameter accepted in this PWV model. Oral hypoglycemic drugs, HbA1C, plasma glucose do not contribute to the PWV model. RAAS blockade drugs contribute to the PWV model.

Diabetes control quality over the time when coming to the point of having insulin as a treatment is an independent factor of arterial wall rigidification.

P8.07
REFERENCE VALUES FOR ARTERIAL STIFFNESS MEASURED WITH ARTERIOGRAPHY

B. Benczúr 1, R. Bőcskei 2, M. Illyés 3
1“Hetiényi Géza” County Hospital, Dept. of Cardiology, Szolnok, Hungary
2Semmelweis University, Dept. of Pulmonology, Budapest, Hungary
3Heart Institute, University of Pécs, Pécs, Hungary

Elevated aortic pulse wave velocity (aPWV) is an independent predictor of cardiovascular morbidity and mortality. There are, however, no widely accepted normal or reference values for aPWV. The aim of this work was to define these values.

Patients and methods: AooPWV was assessed in several patient populations using oscillometric device (TensoMed Arteriograph) by a numerous investigators and data were collected into a large database of 17173 subjects aged 2-92 years. AooPWV was studied in a group of 11024 normotensive individuals without antihypertensive medication which was divided into age decades in order to determine the age-specific reference values for aoPWV.

Results: Mean age was 39.5 ± 20.12 and 43.6 ± 17.82 yrs in males and females, respectively (p < 0.001). Mean aoPWV differed significantly between genders (7.9 ± 2.3 vs 8.9 ± 2.7; p < 0.001). Median aoPWV values in the age subgroups by decades were determined (5.44, 6.08, 6.69, 7.29, 8.38, 9.81, 10.15, 10.41, 11.02 m/s from the age under 10 to 80-90, respectively). The 75th and 95th percentiles of the samples were used to determine the upper limit of aoPWV reference values.

Conclusions: The value above 12 m/s suggested as a threshold for elevated aoPWV by ESH’07 can be questioned as PWV depends on the method used to calculate the travel distance. Our results derived from a huge healthy general population including wide range of age suggest that aoPWV values are highly dependent on age and gender. Therefore, these results might serve as age and gender specific reference values for aoPWV.