P7.12: PULSE PRESSURE AND INTIMA MEDIA THICKNESS IN RELATION TO SERUM VITAMIN D CONCENTRATION IN A SAMPLE OF GENERAL POPULATION

Agata Franczyk*, Katarzyna Stolarz-Skrzypek, Agnieszka Olszanecka, Wiktoria Wojciechowska, Anna Wesołowska, Kalina Kawecka-Jaszcz, Danuta Czarnecka


To link to this article: https://doi.org/10.1016/j.artres.2015.10.315

Published online: 7 December 2019
P7.10
MULTI-SITE ULTRASOUND ASSESSMENT OF ARTERIAL REMODELING AND DISTENSIBILITY IN MARATHON RUNNERS
Rosa Maria Bruno 1,2,*, Elisabetta Bianchini 1,2,*, Nicole Di Lascio 1,2, Francesco Stea 1,2,*, Kristian Ujka 1,2, Alberto Marabotti 1,2, Erik Stroeken 1,2, Lorenzo Ghidoni 1,2, Lorenza Pratali 1,2
1Institute of Clinical Physiology, CNR, Pisa, Italy
2University of Pisa, Pisa, Italy
3Radboud University, Nijmegen, The Netherlands

Objective: to investigate features of arterial remodeling and distensibility in marathon runners by a multi-site, non-invasive approach.

Methods: 46 marathon runners (M) and 15 age-sex- and BMI matched sedentary (S) individuals were recruited (men 70 vs 67%, p = 0.83; age 44 ± 7 vs 43.6 ± 6 years, p = 0.62; BM 23 ± 2 vs 23 ± 1, p = 0.65; brachial BP 127.1 ± 12.7/76 ± 9 vs 123.1 ± 10.7/74.4 ± 8 mmHg, p = 0.29 and 0.30; HR 53 ± 14 vs 64 ± 8 bpm, p = 0.004). The following measurements were performed: brachial blood pressure (BP – oscillographic method), carotid and femoral BP, aortic BP (applanation tonometry-transfer function), carotid-femoral pulse wave velocity (PWV), ultrasound assessment of abdominal aorta, were common, carotid, common femoral and brachial artery. For each arterial site mean diameter (MD) and local distensibility coefficient (DC) were assessed.

Results: M in comparison with S had increased aortic MD (15.8 ± 2.0 vs 13.1 ± 1.1 mm, p = 0.0001) and reduced DC (30.3 ± 15.2 vs 38.5 ± 10.5, p = 0.05), with similar carotid and brachial MD (7.16 ± 0.59 vs 7.04 ± 0.77 mm and 4.05 ± 0.56 vs 3.99 ± 0.82 mm, p = ns) and DC (38.0 ± 9.3 vs 40.2 ± 11.5 and 9.9 ± 6.6 vs 8.9 ± 5.6, p = ns). Furthermore, femoral MD was increased (9.8 ± 1.0 vs 8.8 ± 1.4, p = 0.01), whereas DC was similar (29.0 ± 12.5 vs 33.1 ± 16.1, p = ns). Carotid, femoral and aortic BP, carotid and femoral IMT, as well as carotid-femoral PWV (6.6 ± 1.5 vs 6.7 ± 0.9 m/s, p = 0.86), were similar in M and S.

Conclusions: Marathon runners present remodeling of aorta and femoral arteries and reduced abdominal aortic distensibility. Multi-site assessment of local arterial distensibility might be more useful than assessment of regional arterial stiffness to identify specific patterns of vascular structure and function in athletes.

P7.11
PREDICTIVE VALUE OF ENDOTHEL DYSFUNCTION ASSESSED BY FLOW MEDIATED VASODILATATION AND ARTERIAL STIFFNESS PARAMETERS IN THROMBOTIC EVENTS OF PRIMARY ANTIPHOSPHOLIPID SYNDROME
Agnes Dioszegi 1,*, Katalin Veres, Beata Kovacs, Viktor Banhegyi, Pal Soltész University of Debrecen, Clinical Center, Department of Internal Medicine, Division of Angiology, Debrecen, Hungary

Primary antiphospholipid syndrome (APS) is characterized by recurrent arterial or venous thrombosis and/or fetal loss in the presence of antiphospholipid antibodies. The authors in a longitudinal (2005-2015) follow-up study examined how the angiological and metabolic parameters have associated with the latter thrombotic events and the changing of examined parameters and if the parameters have any predictive values in APS specific events.

In 2005 49 primary APS patient were enrolled. In 2015 26 patient participated in the follow up measurements, but we obtained clinical history from all of the patients. Endothel function was described by flow mediated vasodilatation (FMD), stiffness parameters (augmentation index, pulse wave velocity), carotis intima-media thickness (cIMT) were examined, and vascular distensibility (distensibility). In the thrombotic group the cIMT significantly increased (p < 0.05), with similar carotid and brachial MD (7.16 ± 0.59 vs 7.04 ± 0.77 mm, p = ns) and DC (38.0 ± 9.3 vs 40.2 ± 11.5 and 9.9 ± 6.6 vs 8.9 ± 5.6, p = ns). Furthermore, femoral MD was increased (9.8 ± 1.0 vs 8.8 ± 1.4, p = 0.01), whereas DC was similar (29.0 ± 12.5 vs 33.1 ± 16.1, p = ns). Carotid, femoral and aortic BP, carotid and femoral IMT, as well as carotid-femoral PWV (6.6 ± 1.5 vs 6.7 ± 0.9 m/s, p = 0.86), were similar in M and S.

Conclusions: Marathon runners present remodeling of aorta and femoral arteries and reduced abdominal aortic distensibility. Multi-site assessment of local arterial distensibility might be more useful than assessment of regional arterial stiffness to identify specific patterns of vascular structure and function in athletes.