4.8: ARTERIAL STIFFNESS AND ITS RELATIONSHIP TO MORTALITY IN PATIENTS WITH PERIPHERAL ARTERY DISEASE

Gabriel Dimitrov, Giovanni Scandale, Martino Recchia, Edoardo Perilli, Marzio Minola, Gianni Carzaniga, Maria Carotta, Mariella Catalano

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Conclusions: An independent association between hippocampal and para-hippocampal CBF and systemic endothelial function is present in individuals with MCI.

4.7 PARAMETERS OF THE RESERVOIR-WAVE APPROACH AND MORTALITY IN DIALYSIS POPULATION

Mohsen Agharazii 1, Catherine Fortier 1, Marie-Pier Desjardins 1
Martin Schultz 2, James Sharman 2
Edoardo Perilli 1, Marzio Minola 1, Gianni Carzaniga 2, Maria Carotta 1,
Mohsen Agharazii 1, Catherine Fortier 1, Marie-Pier Desjardins 1,
DIALYSIS POPULATION

Conclusions: During follow-up 26 (11,6%) deaths occurred. Among them, 5 (19%) were of cardiovascular origin. The Cox analysis applied to data relative to the third tertile of aPWV (11.4–21.4, m/s), is significant for age, (p = 0.039), smoking history (p = 0.0003) non use of lipid lowering drugs (p = 0.026) and lower height (p = 0.007) but not for aPWV (p = 0.312), Aix (p = 0.075) and ABI (p = 0.305).

Conclusions: The present study provides further insights into the lack of association between large artery stiffness, pressure wave reflections and mortality in PAD patients.

References

5.1 EFFECTS OF THE SGLT2 INHIBITOR EMPAGLIFLOZIN ON VASCULAR FUNCTION AND CENTRAL HEMODYNAMICS IN PATIENTS WITH TYPE 2 DIABETES

Christian Ott, Kristina Striepe, Agnes Jumar, Marina Karg, Markus Schneider, Dennis Kannenkeri, Roland Schmieder
Department of Nephrology and Hypertension, Friedrich-Alexander University Erlangen-Nuremberg, Germany

Conclusions: Amongst all parameters of the reservoir-wave analysis, DC was associated with a significant decrease in survival time (p < 0.001). Amongst all parameters, only DC and XS integral were predictors of all-cause mortality in univariate Cox analysis as shown by hazard ratios for changes in 1-standardized deviation (HR 1-SD, Table 1). However, DC and XS integral were no longer significant when age was introduced in the model (p-value > 0.179).

Continuous variables HR 1-SD 95% CI p-value
Peak RP(mmHg) 1.121 0.987–1.273 0.079
RP integral(mmHg sec) 1.050 0.920–1.197 0.470
Peak XS(mmHg) 1.112 0.996–1.281 0.138
XS integral(mmHg sec) 1.217 1.062–1.395 0.005
SC(×10 0.5) 1.099 0.970–1.244 0.138
DC(×10 0.5) 1.186 1.60–1.328 0.003

4.8 ARTERIAL STIFFNESS AND ITS RELATIONSHIP TO MORTALITY IN PATIENTS WITH PERIPHERAL ARTERY DISEASE

Gabriel Dimitrov 1, Giovanni Scandale 1, Martino Recchia 2, Edoardo Perilli 1, Marzio Minola 1, Gianni Carzaniga 1, Maria Carotta 1, Mariella Catalano 2
1Research Center on Vascular Diseases and Angiology Unit, University of Milan, Milan, Italy
2Research Center on vascular diseases, University of Milan, Milan, Italy

Conclusions: Amongst all parameters of the reservoir-wave analysis, DC was the most important parameter associated with survival time and mortality. Despite its hypothetically more integrated approach to arterial tree function, none of the derived parameters showed a robust and independent association with mortality in this population. The study shows that despite its simplicity, arterial stiffness gradient remains the best predictor of mortality in this population.

Background and aim: Several studies (1,2) suggest that patients with peripheral artery disease (PAD) show an increase in arterial stiffness, nevertheless the impact on mortality is less documented. (3)

Methods: 228 PAD patients mean age (68 ± 9 years) were followed-up for 4.8 ± 2 years. Anthropometric and clinical measurements were collected, ankle-brachial index (ABI) was estimated with standard protocol and hemodynamic parameters (central blood pressure, aortic pulse wave velocity [aPWV], augmentation index [Aix]) were measured using application tonometry. Prognostic factors of mortality were identified by Cox proportional hazards regression model.

Results: During follow-up 26 (11,6%) deaths occurred. Among them, 5 (19%) were of cardiovascular origin. The Cox analysis applied to data relative to the third tertile of aPWV (11.4–21.4, m/s), is significant for age, (p = 0.039), smoking history (p = 0.0003) non use of lipid lowering drugs (p = 0.026) and lower height (p = 0.007) but not for aPWV (p = 0.312), Aix (p = 0.075) and ABI (p = 0.305).

Conclusions: The present study provides further insights into the lack of association between large artery stiffness, pressure wave reflections and mortality in PAD patients.