P2.9: A NOVEL SPECKLE TRACKING TECHNIQUE FOR INVESTIGATING REGIONAL MOTION OF THE CAROTID WALL: SPATIO-TEMPORAL VARIATION IN DISTENSION ASSOCIATES WITH PRESENCE OF CALCIFIED PLAQUE

Benyu Jiang*, Jing Wang, Tim Spector, Phil Philip J. Chowienczyk

To cite this article: Benyu Jiang*, Jing Wang, Tim Spector, Phil Philip J. Chowienczyk (2015) P2.9: A NOVEL SPECKLE TRACKING TECHNIQUE FOR INVESTIGATING REGIONAL MOTION OF THE CAROTID WALL: SPATIO-TEMPORAL VARIATION IN DISTENSION ASSOCIATES WITH PRESENCE OF CALCIFIED PLAQUE, Artery Research 12:C, 8–8, DOI: https://doi.org/10.1016/j.artres.2015.10.215

To link to this article: https://doi.org/10.1016/j.artres.2015.10.215

Published online: 7 December 2019
Results: Forty-eight patients participated in the study. The average age was 60.8±13.4 years. The mean dialysis vintage was 58±66 months. Patients received adequate renal replacement therapy and the mean urea reduction rates was 72±4.5. At the onset and at the end of the study, no major hemodynamic changes were detected (mean systolic/diastolic blood pressure (147.2±20/78.1±11 vs 138.2±20/77.1±10 mmHg) according to our aforementioned criteria. Compared to pre-dialysis, an improvement in the test score was revealed after dialysis, paired t-test (p = 0.03). Mean values of MMSE pre and post was 26.61 ± 3.24 and 28.86 ± 1.98 respectively (amelioration of 2.25 points).

Conclusions: Our results may be used as a starting point, in an effort to evaluate the best possible time, pre or post dialysis, to provide medical advice to these patients.

P2.10
EXAGGERATED EXERCISE BLOOD PRESSURE INDEPENDENTLY PREDICTS INCIDENT HYPERTENSION: A SYSTEMATIC REVIEW AND META-ANALYSIS
Benjamin Gavish 1,*, Michael Bursztyn 2
1Yazmonit Ltd., Eshtaol, Israel
2Hadassah-Hebrew Univ Medical Ctr. Mount-Scopus, Jerusalem, Israel

Arterial pressure-volume relationship frequently deviates from the linearity expected from an ideal elastic tube. As a result, pulse pressure (PP) can be split into an ‘elastic’ component (elPP) and an excess value PP-elPP. We define the ratio (PP-elPP)/elPP as arterial nonlinearity marker (NLM). OBJECTIVE: Determining NLM from ambulatory BP (ABP) measurements and investigating its clinical and demographic characteristics and prognostic significance in hypertensive patients. METHODS: Following a previously described model-based procedure, NLM was determined from the variability of systolic BP (SBP) and diastolic BP (DBP). The predictive power of NLM was estimated using Cox proportional hazards regression adjusted for age, gender, body mass index, mean heart period, SBP- and heart-rate dipping and hypoglycemic and antihypertensive medication status. NLM variation with age or DBP changes in 10-years or 10-mmHg intervals, respectively, was evaluated using adjusted ANOVA and pairwise comparisons for the grouped variables. RESULTS: We analyzed 1,999 ABP records of individual hypertensive patients, (age 56±16 years, 55% women, 60% on antihypertensive medication and 9% with diabetes, average BP 139/79mmHg, median DBP 78mmHg), followed 5 years for all-cause mortality, of whom 103 died. Mean(SD) [range] for PP were 60(14)[27-132] mmHg and for NLM 0.20(0.14) [-0.22-1.00]. PP and NLM were positively correlated (r = 0.53). NLM increased increased the risk for incident in-clinic hypertension (peak RE = 1.52 [95% CI: 0.99, 2.33], I2 = 80.4%; moderate RE = 1.90 [95% CI: 1.11, 3.28], I2 = 75.5%).

Conclusions: An EEBP independently predicts incident hypertension, thus indicating that clinicians supervising exercise stress testing should consider additional patient follow-up with respect to BP control and lifestyle intervention to reduce CV risk among patients with EEBP.