P159: ASSOCIATION BETWEEN PULSE WAVE VELOCITY AND APNEA-HYOPPNEA INDEX IN PATIENTS WITH TYPE 2 DIABETES AND OBSTRUCTIVE SLEEP APNEA

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correlated with FMD (r = 0.828; p = 0.011; rspearman = 0.738; p = 0.037). No indices of BP variability correlated with cIMT or cDC.

Conclusions: BP variability, in particular ARV, shows a correlation with systemic but not local vascular stiffness in a sample of obese children, suggesting a relation between daily BP variability and arterial elastic properties. Further studies, especially perspective ones, are needed to clarify the pathophysiological significance of these relations.

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Introduction: Obstructive sleep apnea (OSA) is associated with increased cardiovascular (CV) risk. OSA is highly prevalent among patients with type-2 diabetes (T2D). Patients with T2D have increased risk of cardiovascular events, and have an increased aortic stiffness. Continuous Positive Airway Pressure (CPAP) treatment reduces severity of OSA, but whether it reduces CV risk remains unclear. One randomized trial with CPAP intervention and pulse wave velocity (PWV) as endpoint has shown a significant reduction in PWV after four months, in non-diabetic patients. The effect on patients with diabetes remains unknown.

Aim: Investigate the effects of CPAP treatment on PWV in patients with T2D and newly diagnosed OSA. Furthermore, investigate the relationship between PWV and severity of OSA.

Method: A randomized, controlled, multicenter study. 70 patients with T2D and newly diagnosed OSA randomized to: CPAP treatment or a control group. Data will be collected at baseline, 4 and 12 weeks. PWV was measured using SphygmoCor (AtCor Medical, Sydney, Australia) and AHI measured using Apnealink (ResMed, Poway, CA, USA). Relationship between PWV and AHI was evaluated at baseline.

Results: Baseline data from the first 21 patients showed mean age 63 years (±8.1), mean systolic blood pressure (BP) was 134 (±12.5) mmHg, mean AHI was 30.2 (±12.4) and mean PWV was 11.6 (±1.9) m/s. AHI was associated with PWV in multivariate analysis with adjustment for age and systolic BP, beta-coefficient 0.08, p = 0.029.

Conclusion: At baseline PWV and AHI were correlated. Progression of the study will reveal if CPAP treatment can lower PWV in this cohort.