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Abstracts

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T6:OS1 – Cardiometabolic interactions

T6:OS1.1
Effects of therapeutic weight loss and metabolic improvement on P wave dispersion in overweight and obese patients

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Introduction: Obesity represents an independent risk factor for the development of atrial fibrillation. Atrial electrophysiology can be represented by a basic, noninvasive ECG indicator: P wave dispersion. Our aim is to investigate the effects of therapeutic weight loss and metabolic improvement on P wave dispersion in obese and overweight patients.

Methods: We performed a post hoc analysis of prospectively gathered data from a randomized clinical trial. 32 healthy overweight and obese patients [16 males and 16 females (respectively mean age ±sd: 48 ±11.8 and 48 ±12 years; mean body mass index (BMI) ±sd: 32.1 ±3.4 and 33 ±3.9 kg/m2)] were examined for six months. They were treated with a hypocaloric balanced diet (~500 Kcal/day), aiming at 5% weight loss at the 6th month. Glycaemia, lipid profile, and an electrocardiogram (ECG) have been checked at t0 and t6. ECGs were transferred to a personal computer via a scanner and then magnified 400 times to examine P wave dispersion.

Results: Both responders and non responders (mean weight loss ±sd respectively –8.6 ±2.92 % and –1.76 ±2.59 %) ameliorated metabolic profile, especially responders [glucose level –6.5% (p = 0.008), LDL –6.9% (p = 0.04)]. Responders showed a more significant P wave dispersion reduction [–0.42 ±0.22 ms, –34.87 ±12.76 % (p = 0.004)], than non responders [–0.13 ±0.34 ms; –34.34 ±32.44 % p = 0.008]. The correlation analysis between the decrease of P wave dispersion and weight loss revealed good degree of correlation (r = 0.6, p = 0.0001).

Conclusion: Our findings suggest that weight loss induces a significant reduction on P wave dispersion.

T6:OS1.2
Correlation between Pulse Wave Velocity and Heart Rate Variability in Young Patients with Metabolic syndrome

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Introduction: To investigate the correlation between pulse wave velocity (PWV) and heart rate variability (HRV) in young patients with metabolic syndrome (MS). Pulse wave velocity (PWV) is the most popular index for assessing the arterial stiffness.

Methods: The analysis was performed in 45 patients – 22 men and 23 women mean age ± sd: 21–40 years with MS. And 10 normal volunteers. The PWV were examine a non-invasive digital volume pulse (DVP) measuring system using a dual channel simultaneous measurement method. The changes of systolic and diastolic blood pressure and of pulse rate after active standing were registered noninvasive.

The RR intervals were recorded by means of MP 100 computerizes system with ECG module and the maximal –minimal interval during deep breathing (HRDb), the Valsalva ration (VR), and the 30 :15 ratio were calculated automatically.