



## RV-019 - METABOLICALLY HEALTHY OBESITY: PRESENCE OF ARTERIAL STIFFNESS IN THE PREPUBESCENT POPULATION

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### Resumen

**Objectives:** Our aim was to assess the clinical, analytical, and dietary variables associated with arterial stiffness, measured by pulse wave velocity in a prepubescent population with metabolically healthy obesity.

**Methods:** A cross-sectional study in prepubescent subjects with obesity who had 1 or none metabolic syndrome criteria (abdominal perimeter and blood pressure  $\geq 90^{\text{th}}$  percentile, triglycerides  $> 150$  mg/dL, HDL-cholesterol  $100$  mg/dL) were conducted. Adherence to Mediterranean Diet, blood pressure, BMI, waist/height ratio (WHtR), glycemic status, lipid profile, and carotid-femoral PWV were analyzed.

**Results:** 75 MHO children (boys: 43; girls: 32;  $p = 0.20$ ) (age =  $10.05 \pm 1.29$  years; BMI =  $25.29 \pm 3.5$  kg/m<sup>2</sup>) were included. We found a positive correlation between carotid-femoral PWV and weight ( $r = 0.51$ ;  $p < 0.0001$ ), BMI ( $r = 0.44$ ;  $p < 0.0001$ ), WHtR ( $r = 0.26$ ;  $p = 0.02$ ), fasting insulin levels ( $r = 0.28$ ;  $p = 0.02$ ), and insulin resistance (HOMA-IR index) ( $r = 0.25$ ;  $p = 0.04$ ). Multiple linear regression analysis identified BMI and HOMA-IR as independent parameters associated with PWV.

**Conclusions:** In MHO prepubescent children, BMI and insulin-resistance status are related to arterial stiffness. PWV could potentially be a useful non-invasive technique to identify cardiovascular risk in childhood.

### Bibliography

- Gómez-Huelgas R, Ruiz-Nava J, Santamaria-Fernández S, Vargas Candela A, Alarcon-Martín AV, Tinahones FJ, Bernal-López MR. Impact of intensive lifestyle modification on levels of adipokines and inflammatory biomarkers in metabolically healthy obese women. *Mediators of Inflammation*. 2019;4165260.