



<https://www.revclinesp.es>

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

*M.I. Ruiz Moreno<sup>1</sup>, A. Vilches Pérez<sup>2</sup>, C. Gallardo Escribano<sup>3</sup>, A. Gallardo Escribano<sup>1</sup>, A. Ruiz Moreno<sup>1</sup>, R. Bernal López<sup>1</sup> and R. Gómez Huelgas<sup>1</sup>*

<sup>1</sup>Departamento de Medicina Interna. Hospital Civil. Málaga. <sup>2</sup>Departamento de Endocrinología y Nutrición. Hospital Clínico Universitario Virgen de la Victoria. Málaga. <sup>3</sup>Departamento de Análisis Clínicos. Hospital Regional Universitario de Málaga. Málaga.

### 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  $> 150 \text{ mg/dL}$ , HDL-cholesterol  $100 \text{ mg/dL}$ ) 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  $= 25.29 \pm 3.5 \text{ kg/m}^2$ ) 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

1. Gómez-Huelgas R, Ruiz-Navarro J, Santamaría-Fernández S, Vargas Candela A, Alarcón-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.