



P107 Endothelial Dysfunction Associated with Arterial Stiffness in Postmenopausal Women with Obesity

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ABSTRACT

Background: Endothelial dysfunction (ED) represents an initial step of “vascular failure” [1]; several factors affect the functionality of the endothelium. Obesity [2] and estrogen deficiency [3] are independently associated with this. The early detection of ED is essential to intervene and prevent its progression. One of the most promising methods to assess vascular endothelial function is the measurement of endothelium- dependent flow-mediated vasodilation (FMD) [1]. Similarly, pulse wave velocity (PWV) is considered as a predictive value for the stratification of vascular risk [4], however, progression between endothelial events and arterial stiffness continues to be examined.

Objective: To evaluate the association between endothelial dysfunction and arterial stiffness in postmenopausal women with obesity.

Methods: Descriptive study of 19 postmenopausal women with grade I and II obesity, without associated comorbidities. Participants were classified into one of two groups: with ED (FMD < 6%) or non-ED (FMD > 6%). The hemodynamic metabolic, hormonal and arterial stiffness parameters were evaluated.

Results: The group with ED ($n = 10$) compared to the non-ED group ($n = 9$) presented age 57.30 ± 4.80 vs 52.40 ± 5.70 years ($p = \text{NS}$); BMI 34.75 ± 2.06 vs 33.06 ± 2.51 kg/m² ($p = \text{NS}$). Statically significant findings include: FSH 35.43 ± 11.04 vs 55.19 ± 19.27 mIU/ml ($p = 0.018$); PWV 9.18 ± 1.84 vs 7.52 ± 1.26 m/s ($p = 0.041$); central SBP 135 ± 15.90 vs 120 ± 18.2 mmHg ($p = 0.041$). We also measure estradiol, QIMT, SBP, DBP, PP, AIx, LDL-C, HDL-C and triglycerides, no significant differences were observed.

Conclusion: We can conclude that in the group with endothelial dysfunction the PWV and the cSBP are higher with a significant difference.

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