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(006) GENITAL VASCULAR RESISTANCE AS A PREDICTOR OF CARDIOVASCULAR RISK ACCORDING TO THE ANALYSIS OF THE PROGETTO CUORE IN PREMENOPAUSAL WOMEN

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Introduction: Gender disparity persists in the relationship between sexual dysfunction and cardiovascular risk (CV). It is well-known that erectile dysfunction (ED) represents a sign of subclinical CV pathology and that alterations in color Doppler penile ultrasound parameters serve as predictive markers of major CV events. Female sexual dysfunction (FSD) is a complex condition that involves psychological and organic components, including the cardiovascular system, and affects the quality of life of over a third of women. However, despite its high prevalence, little attention has been paid to the vascular system responsible for blood supply to the female genital apparatus. In men, the hypothesis of penile artery size is a proposed pathophysiological mechanism to address the relationship between the onset of ED symptoms and cardiovascular disease. In recent years, it has also been highlighted that compromised genital vascularization may be a precursor to cardiovascular diseases in women.

Objective: Our aim is to investigate the association between clitoral pulsatility index (PI), evaluated through Clitoral color Doppler ultrasound (CDU), and cardiometabolic risk factors in women referred to the Andrology, Women’s Endocrinology and Gender Incongruence Unit, Careggi University Hospital, Florence, Italy.
Methods: In an observational study, a total of 361 women with a mean age of 45.1 (±13.3) years were evaluated. All patients underwent a thorough medical history assessment, an evaluation of anthropometric parameters, blood sampling for measurement of metabolic and hormonal parameters and a Doppler ultrasound of the clitoral cavernous artery to measure the PI.

Results: 23.5% of the patients were overweight and 11.6% were obese, 16.3% had hypertension, and 18.6% had metabolic syndrome. In the multivariate analysis, after adjusting for age, the PI was positively correlated with body mass index (BMI) (β=0.160, p=0.003) and waist circumference (β=0.186, p=0.002). Furthermore, all women underwent cardiovascular risk assessment, as indicated by Progetto CUORE, assigning a score based on the presence of risk factors (blood pressure, cholesterol levels, smoking, diabetes, age, gender) to estimate the absolute global cardiovascular risk over the next 10 years. We observed that, particularly in women of reproductive age, the clitoral PI was positively correlated with the Progetto CUORE score (r=0.136, p=0.035).

Conclusions: Clitoral PI increases in relation to several cardiometabolic risk factors. It is therefore relevant to understand how common cardiometabolic alterations may influence vascular function in the female genital tract and whether treating these alterations leads to an improvement in clitoral ultrasound indices, especially in young premenopausal women.

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