

## Sex differences in patients with ischemia and no obstructive coronary disease subjected to intracoronary acetylcholine test in a multicenter registry

L. Grigorian<sup>1</sup>, E. Gutierrez<sup>1</sup>, J.F. Oteo<sup>2</sup>, O. Abdul-Jawad<sup>3</sup>, I. Amat Santos<sup>4</sup>, A. Gutierrez Barrios<sup>5</sup>, A. Fernandez Ciscal<sup>6</sup>, J. Jimenez Mazuecos<sup>7</sup>, J. Roa<sup>8</sup>, M.E. Vazquez<sup>1</sup>, R. Sanz<sup>1</sup>, F. Diez-Delhoyo<sup>1</sup>, A. Rivera<sup>1</sup>, J. Elizaga<sup>1</sup>, F. Fernandez-Aviles<sup>1</sup>

<sup>1</sup>University Hospital Gregorio Maranon, Madrid, Spain; <sup>2</sup>University Hospital Puerta de Hierro Majadahonda, Madrid, Spain; <sup>3</sup>Germans Trias i Pujol University Hospital, Barcelona, Spain; <sup>4</sup>University Hospital Clinic of Valladolid, Valladolid, Spain; <sup>5</sup>University Hospital Puerta del Mar, Cadiz, Spain; <sup>6</sup>University General Hospital of Valencia, Valencia, Spain; <sup>7</sup>Albacete University Hospital, Albacete, Spain; <sup>8</sup>Hospital Juan Ramon Jimenez, Huelva, Spain

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**Background:** Ischemia with no obstructive coronary disease (INOCA) is increasingly diagnosed because of wide performance of coronary angiography. Prevalence of INOCA is higher in women than in men, however the exact pathophysiological mechanisms which may explain this phenomenon are still not very well understood.

**Objective:** To evaluate differences in clinical and procedural characteristics between men and women with INOCA subjected to intracoronary acetylcholine test (Ach).

**Methods:** A total of 210 women and 148 men with INOCA diagnosed with coronary angiography, were prospectively enrolled in a multicenter, observational registry. Ach test was performed according to clinical indications in all included patients. After 1-year patients were re-evaluated for major cardiovascular events, angina symptoms and prescribed medical treatment.

**Results:** Mean age of 60.6±13.6 years old was similar in both populations, but differences were observed in the prevalence of risk factors: active smoking was more frequent among men (43% vs. 17%, p<0.001), who had also a higher number of associated risk factors (≥3 risk factors were present in 31.2% of men vs. 20.2% of women, p<0.01) and more fre-

quent history of percutaneous coronary revascularization (14.2% vs. 6.7%, p=0.03). Women were more prone to have dyspnea than men (35.5% vs. 20.8%, p=0.01). Men had more coronary atherosclerosis in angiography (57.9% vs. 43.7%, p=0.01) and more slow flow in the left anterior descending artery (21.6% vs. 9.0%, p=0.001). Ach was positive in 36.5% of patients, similar in both sexes, with no differences in the type of induced coronary spasm. Among those with a positive Ach test, at one-year, 36% of women vs. 43.6% of men were on optimal medical treatment for vasospasm although the difference was not statistically significant. Importantly, 41.5% of women and 38.1% of men experienced severe symptoms of angina during follow-up.

**Conclusions:** Although men with INOCA have a higher risk profile than women and more coronary atherosclerosis, one third of patients present endothelial dysfunction, similar in both groups, indicating that probably other pathophysiological mechanisms are responsible for it in females. Treatment in these patients remains suboptimal and associated with highly impaired quality of life.