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EDITORIAL COMMENT

Navigating the challenges of ST-segment elevation myocardial infarction in women: A closer look

Desafios na abordagem do enfarte com elevacão do segmento ST nas mulheres: um olhar atento

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Cardiovascular diseases are the leading cause of death in Europe and in developed countries, particularly in women.[1] There are several factors contributing to a worst prognosis in women, but one of the most important is the fact that women, family members and clinicians tend to under-recognize clinical symptoms and signs of heart disease in female patients.[2] This will cause underdiagnosis, significant delays in treatment and frequently, undertreatment.[2] Moreover, women are usually under-represented in clinical trials, and evidence is less strong in women.[2] Notably, in women, classical risk factors have a higher impact on outcome compared to men. In addition, there are other risk factors that are more frequent in women, with some that are exclusive to women (due to their specific biology) that contribute to this heightened female risk.[2]

In the context of acute coronary syndromes, there are significant disparities between men and women. These differences refer to anatomical, physiological, biological, and psychosocial factors which affect each other.[3] Situations of myocardial infarction with non-obstructive coronary arteries (MINOCA), due to microcirculation abnormalities, coronary spasm, spontaneous coronary dissections or even Takotsubo syndrome are more frequently found in women.[3,4]

A paper published in 2020 with data from the Portuguese Registry of Acute Coronary Syndromes (ProACS) showed very elegantly that in Portugal, as in other countries, obesity, hypertension and diabetes are more prevalent in women and that they have more frequently non-ST-segment elevation myocardial infarction, with atypical symptoms.[5] Delays in treatment are more frequent, with more complications, such as major bleeding, heart failure, atrial fibrillation, mechanical complications, cardiogenic shock, stroke, and ultimately, higher in-hospital mortality.[5] They also received less guideline recommended secondary prevention therapies.[5] Therefore, the landscape in Portugal

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regarding ACS seems to mirror what has been described in other European countries.

In the study published in the current issue of the Portuguese Journal of Cardiology, Goncalves et al. conducted a retrospective analysis of a large cohort of ST-elevation myocardial infarction (STEMI) patients included in the ProACS registry, between October 2010 and 2022.[6] The co-primary endpoints were in-hospital and one-year mortality. In this analysis, it was the author's option to include only STEMI patients, to homogenize the population studied, reducing potential confounding factors related to population heterogeneity.

Women were significantly under-represented (25.7%), and this is a very significant finding, considering that the data were obtained from a registry and not from a clinical trial. Significant sex-related differences in Portuguese STEMI patients were found. Compared to men, women were older and had a worse cardiovascular risk profile. They were less likely to receive reperfusion therapy as well as other medication with an impact on prognosis. In-hospital mortality was higher in women.

In line with other publications, but specifically addressing the Portuguese population, this study confirms that there is still a gap in the diagnosis and treatment of acute coronary syndromes in women, and specifically in STEMI patients, in whom fewer gender-differences would be expected, since the diagnosis and management is generally more straightforward than in the general population with ACS.

Every effort should be made towards achieving an equal and high standard of care. Education campaigns targeting the general population and healthcare professionals may help reduce this sex bias. Noncardiac comorbidities should also be strongly accounted for.

Conflicts of interest

The authors have no conflicts of interest to declare.

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