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Acute coronary syndromes: the gender gap in the new ESC guidelines still remains unfilled

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Summary. The new guidelines of the European Society of Cardiology on acute coronary syndromes (ACS) were published during the first day of the European Congress 2023. Great expectations have been placed on the ability to include in these guidelines all the evidence that has emerged in recent years, demonstrating that ACS has different risk factors, clinical and electrocardiographic presentations, responses to therapy, and rehabilitation outcomes between men and women. In particular, women historically and frequently suffer from a poor recognition of clinical symptoms, often mistakenly labeled as 'atypical', but better defined as 'peculiar'. As a result, women are undertreated and not referred to cardiac rehabilitation.
While the new guidelines have presented an extremely important approach to inclusiveness, we believe that the gender gap in diagnosis and treatment can only be addressed through an effective shift in the clinical and scientific paradigm. This involves adequately educating healthcare personnel about the existence of the various forms of ACS, raising awareness among women that ACS is the leading cause of death after menopause, and creating a comprehensive supportive welfare system to ensure equal access to healthcare for all, spanning from the prevention of individual risk factors to secondary prevention and rehabilitation.

Key words. Sex/gender gap, acute coronary syndromes, ESC 2023 guidelines, female cardiovascular health.

The new European guidelines on the management of acute coronary syndromes (ACS),[1] from unstable angina to myocardial infarction, were presented on the first day of ESC Congress 2023, the annual meeting of the European Society of Cardiology that took place in Amsterdam.

The effort made by Borja Ibanez, co-chairperson of the task force that drafted the document, is sincerely appreciable. The main purpose of the authors was, indeed, to emphasize how ACS encompasses a spectrum of different conditions, with some patients experiencing mild symptoms while others deteriorate rapidly. Consequently, the document provides a comprehensive overview of approaches and underlines the importance of antiplatelet therapies and aggressive cholesterol management, while highlighting the necessity of referring patients to cardiac rehabilitation programs. In comparison to previous versions of the ACS guidelines, a new section dedicated to the cardiovascular risk of cancer patients has been added. Moreover, renewed attention has been given to micro-vessel impairment and the ACS subtypes of myocardial infarction/ischemia with non-obstructive coronary arteries (MINOCA/INOCA).

Nonetheless, the well-known peculiarities and differences between men and women with ACS regarding risk factors,[2] clinical presentation, correct assessment of risk factors by clinicians, access to care, methodological approach to therapy and rehabilitation programs, are marginalized in a short paragraph.

We have previously call for the creation of guidelines specifically tailored to the female population, with the goal of addressing the existing gap. At present, we believe that a further step is necessary, which the current guidelines have only partially taken. Now, the scientific community does not feel the need for dedicated guidelines but rather a comprehensive and pervasive sex/gender-specific approach at all stages, ranging from the assessment of risk factors to the rehabilitation of ACS patients.[4]

Great appreciation must be attributed to Figure S1 (shown in the supplementary data and not in the main document)[1], in which the differences in symptoms in ACS between men and women are well reported. In 80% of cases men and women present symptoms attributable to chest pain, but women may also or exclusively have epigastric discomfort, dizziness, diaphoresis, jaw/neck pain, shortness of breath, pain between the shoulder blades, palpitations and fatigue.

Some electrocardiographic characteristics are also recognized regarding ST interval alterations, which may suggest ACS. The authors rightly pointed out that an ECG change with ST-segment elevation ≥2.5 mm in men <40 years, ≥2 mm in men ≥40 years, or ≥1.5 mm is unanimously considered significant in women, irrespective of their age, particularly in leads V2-V3 due to the different stage of cardiac hypertrophy and/or thoracic

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impedance.[1] Nevertheless it is known that non-specific alterations of the ventricular repolarization phase, especially in women, are very frequently associated with an ACS without transmural involvement of the myocardium. Authors reported these data only in the Appendix (Figures S2 and S3).

It should be noted that the authors accurately devoted an important paragraph to ACS during pregnancy. As previously pointed out,[5] the pathophysiology of the damage and the treatment are extremely peculiar and this topic has been appropriately treated separately.[1]

In the new guidelines, the patient is placed at the center of the diagnostic/therapeutic intervention also as a decision-maker, giving considerable importance to his/her perception of health and well-being and to informed therapeutic choices.[1]

This newfound sensitivity, which aims to ensure a more inclusive approach also in the scientific method, should further underscore the necessity for proper specialist training in the context of ischemic heart disease in women. Interventions aimed at promoting greater awareness and better preparation of healthcare personnel are thus necessary.[6] Clinicians must be able to dedicate to each patient, whether man or woman, the appropriate clinical-therapeutic approach, capable of preventing complications or the exacerbation of chronic conditions.[2]

Moreover, the general population, especially the female one, should be properly educated about cardiovascular disease, especially after menopause. In fact, while the cancer screenings that the female population undergoes (mammography, Pap test, etc.) are accurate and necessary, there is still a very limited awareness of cardiovascular disease as the leading cause of death for women in Western countries.

The lack of awareness leads to diagnostic delays that impact women with ACS and result in worse outcomes.[7] This condition in women is further exacerbated by undertreatment and delayed or missed patient referrals to cardiac rehabilitation.[8,9]

The access to treatments is often more difficult for women due to a condition of socioeconomic disadvantage;[10] furthermore, a change in lifestyle can be time-consuming, and often women's social roles do not align with healthy habits.[11] Therefore, the recommendations for secondary prevention should be accompanied by a welfare system able to support women in the social and family role they often cover, to give them physical and mental resources to be able to invest time in their cardiovascular health.[12]

We had the impression that these ESC guidelines have brought a new point of view, certainly more inclusive, in the management of ACS. Nevertheless, we believe it is imperative to continue along this path and complete the great work done so far. The female population is waiting for the gap in the diagnosis, management and treatment of ACS to be filled. We hope that, in the near future, the guidelines will not need appendices or paragraphs dedicated to ACS in women, as we expect that the importance of recognizing and treating these conditions in any individual will be rooted in the clinician's mindset and in women's health awareness.

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