Perspective

Medicine

Myocardial Ischemic Syndrome

A Necessary Nomenclature Update of Coronary Artery Disease

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The switch from the name coronary artery disease (CAD) to myocardial ischemic syndrome (MIS) signifies a more thorough comprehension of the mechanism and clinical presentations of heart disease. CAD largely addresses obstructive coronary lesions, whereas MIS includes a wider range of disorders leading to insufficient blood supply to the heart muscle, including microvascular dysfunction and coronary artery spasm. The revised terminology highlights the varied causes and manifestations of ischemic heart disease beyond conventional stenotic lesions, facilitating more precise diagnosis and tailored treatment approaches based on specific patient attributes. By acknowledging the dynamic characteristics of myocardial ischemia, healthcare providers can more effectively manage the intricate interactions of risk variables and customize interventions to enhance patient outcomes.

Keywords: Nomenclature; Coronary Artery Disease; Myocardial Ischemic Syndrome; Disease Classification; Outcomes

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THE MEDICAL field's nomenclature is frequently changing in order to more accurately represent our comprehension of diseases and conditions. This modification in terminology is not merely a rebranding exercise; rather, it is indicative of a more extensive transformation in the way we define and categorize heart disease.

Initially, it is crucial to comprehend the historical context of the term coronary artery disease (CAD). The term CAD has been in use for a long time to refer to a condition in which the coronary arteries become obstructed or constricted, resulting in a decrease in the passage of blood to the heart (Slater & Rill, 2004). Although this term accurately describes the underlying anatomical changes that occur in the blood vessels, it fails to completely reflect the complexity and variability of symptoms and outcomes observed in patients with this condition (Nosher et al., 2014; Yetkın & Öztürk, 2018; Yu et al., 2008).

In contrast, myocardial ischemic syndrome (MIS) is a more comprehensive and inclusive term that incorporates the diverse range of clinical manifestations that can result from impaired blood flow to the heart muscle, in addition to the structural changes in the coronary arteries (Crossman, 2004; Ferris & Friesen, 1979; Fishbein et al., 2015; Gowda et al., 2004;

Moskowitz et al., 1988). This new terminology demonstrates a more comprehensive comprehension of the fundamental pathogenesis of heart disease and underscores the significance of evaluating both the anatomical and functional components of the condition.

The term MIS acknowledges that the consequences of diminished blood flow to the heart are not limited to the immediate danger of heart attack or myocardial infarction (Shimokawa & Yasuda, 2008; Steenbergen & Frangogiannis, 2012). It recognizes that chronic ischemia can result in a variety of symptoms and complications, including chest pain, difficulty of breath, and heart failure, which can have a substantial impact on a patient's long-term prognosis and quality of life (Crossman, 2004; Gabriel‐Costa, 2018; Shimokawa & Yasuda, 2008).

Furthermore, MIS underscores the dynamic nature of cardiac disease, emphasizing that ischemia is not a static, binary condition, but rather a spectrum of abnormalities that can fluctuate over time (Boden et al., 2024). This acknowledgment of the complexity and variability of ischemic heart disease is crucial for the purpose of guiding treatment decisions and monitoring the progression of patients over time.

Additionally, MIS emphasizes the significance of a multidisciplinary approach to the management of cardiac disease (Albakri, 2018; Alkar et al., 2018; Kingma, 2020). It fosters collaboration among cardiologists, radiologists, and other specialists to create comprehensive treatment plans that address the complete spectrum of a patient's needs by acknowledging that ischemic heart disease affects not only the coronary arteries but also the heart muscle itself.

The transition from CAD to the term MIS is indicative of the progress made in diagnostic techniques and imaging modalities, which have allowed for a more precise evaluation of blood flow to the heart and the identification of subtle changes in myocardial perfusion (Beneze et al., 2012; Mohan & Narula, 2012; Sirajuddin et al., 2021). By integrating this broader spectrum of diagnostic information into our classification of heart disease, we can more effectively customize treatment strategies to the unique requirements of individual patients and enhance their outcomes.

MIS also underscores the potential for a more personalized approach to the management of heart disease, with an emphasis on the optimization of blood supply to the heart muscle and the targeting of specific ischemic pathways (DeGroat et al., 2024; Gray & Pathmanathan, 2018; Mehta et al., 2024). This precision medicine approach has the potential to enhance outcomes and alleviate the burden of cardiac disease on healthcare systems and individuals.

Eventually, MIS may contribute to the reduction of stigma and misconceptions associated with cardiac disease (Aimo et al., 2024; Gameiro et al., 2018; Hasanzad et al., 2019; Leopold & Loscalzo, 2018). By abandoning terminology that exclusively emphasizes the presence or absence of obstructions in the coronary arteries, we can redirect the discourse toward a more comprehensive comprehension of ischemic heart disease as a dynamic, multifaceted condition that impacts individuals in a variety of ways.

In sum, the advancement of our comprehension and classification of cardiac disease is exemplified by the transition from the term CAD to MIS. This new terminology has the potential to enhance the quality of life and outcomes of patients with ischemic heart disease by recognizing the complexity and variability of the condition and emphasizing the significance of a multidisciplinary, personalized treatment approach. In order to guarantee that we are accurately representing the underlying pathogenesis and providing the highest quality of care for individuals with ischemic heart disease, it is imperative that our nomenclature stays current with the ongoing evolution of our understanding of heart disease.■

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