Biomarkers in the diagnosis, management and prognosis of cardiovascular disease

Useful and feasible dynamic biomarkers for the diagnosis, management, and prognosis of cardiovascular diseases (CVD) represent an important and emerging tool in the field of medicine. Likewise, knowledge of new biomarkers related to CVD may provide clinicians with more potential tools to quickly identify patients at higher risk of CVD, attenuate its occurrence, improve its management, and decrease the risk of adverse events. In this special issue, the reader will find state-of-the art contributions involving both classic and novel biomarkers of CVD, specifically in myocardial infarction (MI), coronary artery disease (CAD), heart failure (HF), and hypertrophic cardiomyopathy (HCM).

Briefly, Lippi *et al.* (1) evaluated the effect of using a contemporary versus a high-sensitivity (HS) cardiac troponin I (cTnI) immunoassay in misclassifying patients in the emergency department (ED). Interestingly, it was concluded that HS immunoassays improve the diagnosis of acute MI, particularly in those patients showing non-diagnostic cTnI values at presentation. On the other hand, Cardona-Monzonís *et al.* (2) focused on reviewing novel epigenetic biomarkers of CVD, particularly DNA methylation, circulating histones and nucleosomes, and microRNAs in MI, CAD, HF, and HCM. In a literature review, Shere and collaborators (3) present a wide range of prevalent biomarkers involved in the pathophysiology, development, progression, and therapeutic efficacy of essential hypertension. These biomarkers may represent an elemental axis in the prevention and control hypertension. As for HF biomarkers, Berezin (4) highlighted the most commonly used biomarkers in this disease, while also pointing out the importance of carrying out larger clinical trials in order to validate its utility and ultimately implement them. Finally, López-López and Pareja-Galeano (5) presented an interesting review about how exercise may provoke fluctuations in CVD biomarkers typically used in clinical diagnosis. Therefore, these increments may indicate an adaptive response to exercise rather than an underlying disease. This fact is relevant for clinicians since these levels may exceed the normal limits and might led to a misdiagnosis.

Hence, in my opinion, the reader will find cutting edge contributions in this Special Issue. I am proud to bring together these important names in the field and I am also convinced that this Special Issue will be helpful to clinicians and researchers working in the cardiovascular field.

Footnote

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