COMMENTARY

Cardioprotection: Challenges and Perspectives

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Abstract

Myocardial infarction is a disease that causes high levels of death around the world. Despite improvements in the management of this pathology, myocardial infarction continues to be the leading cause of death all over the planet. This study aimed to show the challenges and perspectives for stopping death caused by myocardial infarction. This, here is shown through by commentary article in basis on new strategies for cardioprotective development using translational studies and innovations into therapeutics prototypes for cardioprotective agents. In conclusion, this paper evidences the understanding of molecular pathology of myocardial infarction to promote new agents in cardiovascular therapy focused on the prevention of acute myocardial infarction.

Open Access

Citation: Paulino, ET. Cardioprotection: Challenges and Perspectives. *Annals of Cardiology*. 2025; 1(1): 3.

Received: April 11, 2025
Accepted: May 20, 2025
Published: June 09, 2025

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Keywords

Cardioprotection, Myocardial Infarction, Pharmacotherapy

Introduction

Myocardial Infarction is a several diseases affecting million peoples in the world.[1] Commonly clinical outcomes turn peoples unable to work return due limitations of hearts insufficiency.[2] Despite the health public organizations have progressed in both: the accuracy of diagnosis and management of pharmacotherapy, data annually around the world showed these progressions haven't ameliorated the index of the new cases or prevention of death or inflection outcomes clinical. Maybe due to complex therapeutics care, multiple phases and uses of many classes of drugs to control oxygen supply from hearts, or the need early diagnosis and management care.[3] In addition, surgical procedures can be fatal by the time of clinical service versus the progression of ischemia drive to hearts.[4]

Challenges

The scientific community has searched for new methods and ways to stopped myocardial infarction cases.[5] Of course, in a new era, novel behaviors by people have become more difficult to arrive at this point. High stressful lifestyle by work and increases in anxiety due to social media could be a contributive mechanism to drive new cases annually.[6] These problems were not considered in the past, where the focus was smoking, hypertension, or age-related, axis-based, considering now a new manner of modern lifestyle.[7] In 2025, it is necessary to return to the molecular bases of the pathophysiology of myocardial infarction, to comprehensively the question: how to stop the first disease of death in the world?.[8] Injury by hypoxia-reperfusion is a point of the iceberg in the pathophysiology of myocardial infarction; it is not enough to solve oxygen supply, and needs to treat silent movements by pathways in the body before existing injury by oxygen imbalance.[3]

In phrases of Kübler & Haas: "*cardioprotection are all mechanisms and means that contribute to the preservation of heart by reducing or even preventing myocardial damage*".[9] Thus, the background of the myocardial infarction pathophysiology is needed, because, if seen closer, it is clear that past factors are predictive and the new aligned in turn of the same axis: the autonomic nervous system, overdriving of the sympathetic ways, and regulatory feedback mechanisms to parasympathetic ways loss levels.[10] Hypertension, ageless, lifestyle anxiety, and work burnout are the triggers to excess norepinephrine and lower levels of acetylcholine behind the development of cardiovascular diseases.[11] Nevertheless, cholinergic ways are considered cardioprotective in new articles or scientific papers.[12] But, would this be the key to the only fit in the lock, in terms of Paul Erlisch?[13] No, but why are the defense systems not effective in overcoming the breakdown development of myocardial infarction, such as β-arrestins, opening potassium channels, signaling of the muscarinic and nicotinic receptors to SAFE (Survivor Activating Factor Enhancement) or RISK (Reperfusion Injury Salvage Kinase) pathology pathways, protection of mitochondria disruption by recent discovery channel's exist into mitochondria.[14,15] Here found the biggest challenges to transpose.

Perspectives

Now, it is necessary to investigate the failure of each mechanism to understand molecular myocardial infarction, which occurs in mammalian animals both small and large; it is equal to occurs in human conditions.[16] At this time, scientists are finding responses to the question and turning to ease translational pharmacology studies. On the other hand to successful of the new strategy proposals in real development, whether through therapeutic innovations, such as immunobiological vaccines using RNAm silencers introduced into adenovirus to prevent new cases or Stem cells by surgical procedures, even if it is expensive for the moment for the majority of the world´s population.[3,17,18] They bring light to translation pharmacotherapy and together reduce costs to all people, similar to what happened recently with COVID-19, or through new compounds to produce cardioprotective actions, based on natural products as a source to new drugs in coherence to Cragg & Newman,2020 studies by introduction nutraceuticals or phytochemicals or synthetic compounds have a potential therapeutic.[19]

Conclusion

In conclusion, this commentary sheds new light on cardioprotection area and prevents myocardial infarction, promoting amelioration in this scenario around the world.

Acknowledgments

I would like to thank the Journal for inviting me to write this "commentary article", free of pay and fees.

Conflict of interest

The author declares no conflict of interest.

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