

Role of Cardio-Specific Micro-Ribonucleic Acids and Correlation with Cardiac Biomarkers in Acute Coronary Syndrome: A Comprehensive Systematic Review

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Abstract

Acute coronary syndrome (ACS) is an acute and severe manifestation of coronary artery disease (CAD); thus, timely diagnosis can save a life. Commonly, cardiac troponin T (CTnT), cardiac troponin I (CTnI) or creatine kinase muscle/brain subtype (CK-MB) have been used as cardiac biomarkers to assess ACS with certain limitations, such as increased time to rise for diagnosis and increased levels in the patients with chronic kidney disease (CKD). Recently, micro-ribonucleic acids (miRNAs) have become potential candidates as biomarkers for cardiac ischemia due to their remarkable stability and reproducibility. Certain miRNAs, for instance, miR-1, miR-133a/b, miR-208a/b, and miR-499a, strongly increase in the serum or plasma of patients with acute cardiac ischemia, making them as cardio-specific miRNAs and prospective biomarkers in ACS. This literature review gives enlightenment about the regulation of cardio-specific miRNA in acute myocardial ischemia (AMI) and correlation with common cardiac biomarkers and time at which they increase in the blood.

Speaker Publications:

1. Coronary artery disease and lunar catecholamine cardiomyopathy, Rowe WJ, International J. Cardiology, 231: 42-46, 2017
2. Neil Armstrong's Lunar Diastolic Hypertension. Rowe WJ J. Hypertens Management 2017, 3: 029e
3. Brake iron dust inhalation intensifying hypertension Rowe WJ International J. Cardiology 2018 September 1, 2018 Volume 266, Page 261.
4. Editorial Brake Iron Dust Inhalation, Magnesium Deficiencies and Hypertension Rowe WJ J. Hypertens Manag 2018, 4: 031e.
5. Rowe WJ The Iron Brake Dust Age and the Female Advantage. Journal Hypertension and Management Editorial Vol. 4, Issue 2, 2018

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Biography:

Dr. Raja Shakeel Mushtaque graduated from Dow Medical college, Pakistan. Later, he did his internship from a tertiary care hospital, Civil Hospital Karachi. He has taken USMLE Exams and has completed ECFMG certification. He has also acquired valuable research experience at Miami, Florida at Miami Heart Study. He has published his research work which comprises on 2 articles in pubmed indexed journal on topics of microRNA and cardiovascular heart diseases. He is currently working as a resident physician PGY2 at a prestigious tertiary care hospital of Pakistan, Jinnah Postgraduate Medical Center, Karachi.