Effects and mechanisms of Chinese herbal medicine in ameliorating myocardial ischemia-reperfusion injury

Qing Liu,1,2 Jiqlang Li,2 Jing Wang,2 Jianping Li,1 Joseph S. Janicki,1 and Daping Fan1

1Department of Cell Biology and Anatomy, University of South Carolina School of Medicine, Columbia, SC 29208, USA
2The Second Clinical School of Medicine, Guangzhou University of Chinese Medicine, Guangzhou 510405, China

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Abstract

Myocardial ischemia-reperfusion (MIR) injury is a major contributor to the morbidity and mortality associated with coronary artery disease, which accounts for approximately 450,000 deaths a year in the United States alone. Chinese herbal medicine, especially combined herbal formulations, has been widely used in traditional Chinese medicine for the treatment of myocardial infarction for hundreds of years. While the efficacy of Chinese herbal medicine is well documented, the underlying molecular mechanisms remain elusive. In this review, we highlight recent studies which are focused on elucidating the cellular and molecular mechanisms using extracted compounds, single herbs, or herbal formulations in experimental settings. These studies represent recent efforts to bridge the gap between the enigma of ancient Chinese herbal medicine and the concepts of modern cell and molecular biology in the treatment of myocardial infarction.
Myocardial ischemia/reperfusion (I/R) injury is the principal cause of death, happens after prolonged obstruction of the coronary arteries. The first inte...