

Non-ischemic myocardial preconditioning

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The reduction of infarct size produced by brief ischemic episodes prior to a sustained occlusion of a coronary artery, called ischemic preconditioning, is a well known phenomenon that occurs in several species, but its mechanism is still under investigation. Recent reports support the idea that this protection can also be obtained by non-ischemic maneuvers like distention of the left ventricle and metabolic stimulation of myocardial cells. The features of non-ischemic preconditioning (temporal limitation, second window, tolerance development, remote preconditioning and efficiency of the protection), as opposed to those of ischemic preconditioning, are still to be determined. Neither is it known if non-ischemic preconditioning occurs in humans. From a physiological point of view the protective effect of an increase in metabolic rate of the heart means a constant feed-back mechanism in the myocardial cell that counteracts the presumptive damage consequent to the increase in metabolism. T