

Cardioprotective effect of Fisetin on cardiac marker enzymes and membrane bound enzymes in Isoproterenol induced Myocardial infarction in male wistar rats

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ABSTRACT

Myocardial infarction is one of the most killer diseases in many parts of the world. This study evaluates the cardioprotective effect of Fisetin on cardiac marker enzymes and membrane bound ATPase in isoproterenol (ISO)-induced myocardial infarction (MI) in rats. Rats were pretreated with Fisetin (10, 20 and 30 mg/kg) orally for a period of 30 days. After the pretreatment, Isoproterenol (100 mg/kg) was administered subcutaneously to rats at an interval of 24 h for 2 days. ISO-induced rats showed a significant increase in the activities of marker enzymes such as creatine kinase (CK), creatine kinase-MB (CK-MB), aspartate transaminase (AST), alanine transaminase (ALT), and lactate dehydrogenase (LDH) in serum and there by subsequent decrease in the heart, and also ISO-induced rats showed a significant increase in heart weight. A significant decrease in the activity of sodium/potassium dependent adenosine triphosphatase and increased in the activities of calcium and magnesium dependent adenosine triphosphatase were observed in the heart of ISO-induced rats. Pretreatment with Fisetin significantly increased the activities of marker enzymes and membrane bound ATPase in Isoproterenol-induced rats. Thus, our study shows that Fisetin possess cardioprotective effect in Isoproterenol-induced Myocardial infarction in rats. Results obtained from histopathological studies also supported that Fisetin has preventive effect against ISO-induced myocardial infarction.