Influence of luteolin on heart functions of rat after different-terms Hypothermic preservation

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: This study was designed to assess whether luteolin enhance myocardial protection during long-term hypothermic preservation of the rat heart. Methods: Forty male SD rats were randomly divided into 4 groups with 10 rats in each group including control group and experiment group after 12h-preservation, control group and experiment group after 18h-preservation. Langendorff model of isolated rat hearts was used. After 30-min basal perfusion, the hearts were stored in University of Wisconsin solution (UW solution) at 4°C with or without luteolin for 12 h or 18h and followed by 60-min reperfusion. The recovery of cardiac contractile and diastolic function, coronary flow (CF) and creatine kinase (CK) leakage in the coronary effluent were determined. Results: With the increase of preservation time, luteolin can significantly retard the decrease of cardiac contractile and diastolic function, increase coronary flow, and reduce the leakage of creatine kinase. Conclusion: These results indicate that luteolin could enhance myocardial protection during long-term hypothermic heart preservation.

[KEY WORDS] Luteolin; Heart cold preservation; Preservation solution