Objectives To observe the protection and its mechanism of Qishenyiqi dripping pills on myocardial infarction.

Methods 50 male SD rats were randomly divided into normal group, model control group, experimental model group, isosorbide dinitrate (ISD) group, Qishen Yiqi (QSYQ) group, 10 rats in each group. Establishment of myocardial infarction models and the model of myocardial infarction with the deficiency of Qi and blood stasis, respectively, with isosorbide dinitrate and Shenqi Yiqi Drop Pill intervention. Cardiac ejection fraction, myocardial infarction and myocardial tissue GSK-3β, TRL4, NF-κB, β-catenin protein and gene expression were observed.

Results After NBT staining, myocardial tissue in the normal group were stained purple; there were large grey infarcted region in myocardial tissue of each model group. There were smaller gray infarcion area than ISD group and QSYQ group. The ejection fraction (EF) in the model group, significantly lower than the normal group; Qishen Yiqi could improve cardiac function p<0.01). Immunohistochemical results shown, GSK-3β and of TRL4 protein expression in the normal group was low, the model group were higher than those in normal group p<0.01); isosorbide dinitrate and Shenqi Yiqi Drop Pill could increase GSK-3β and TRL4 protein expression p<0.01). RT-PCR results show, β-catenin gene expression level was the highest and NF-κB gene level was lowest in the normal group, β-catenin gene level was lower in the model group than that in normal group and NF-κB gene level was higher than that in normal group p<0.01); Qishen Yiqi Drop Pill could increase β-catenin gene expression and decrease NF-κB gene level (<0.01).

Conclusions The effect of Qishen Yiqi Drop Pill on myocardial protection may be relate to regulation of TRL4/NF-κB, GSK-3β/β-Catenin pathway.