(18.81±2.65 vs 5.01±0.84, p<0.05), type III CVF (3.83±0.38 vs 1.52±0.23, p<0.05) and the I/III ratio (4.96±0.90 vs 3.31±0.40, p<0.05) in NIZ were increased significantly. The expressions of FoxO3a mRNA (0.29±0.05 vs 0.57±0.06, p<0.05) and protein by western-blot (0.28±0.04 vs 0.62±0.07, p<0.05) and by immunohistochemistry (2.30±0.52 vs 3.45±0.50, p<0.05) in NIZ were lower significantly in MI group than those in sham group. Comparing with MI group, the LVMI (2.27±0.08, 2.20±0.23 vs 2.62±0.16, p<0.05), the type I CVF (9.26±1.13, 9.27±1.12 vs 18.81±2.65, p<0.05) and type III CVF (2.37±0.23, 2.38±0.11 vs 3.83±0.38, p<0.05) in NIZ and the I/III ratio (3.98±0.79, 3.89±0.42 vs 4.96±0.90, p<0.05) were decreased significantly in Sim and Ato groups, but higher than those in Sham group, the expressions of FoxO3a mRNA (0.49±0.06, 0.47±0.05 vs 0.29±0.05, p<0.05) and protein by western-blot (0.38±0.08, 0.40±0.07 vs 0.28±0.04, p<0.05) and by immunohistochemistry (2.85±0.48, 2.91±0.49 vs 2.30±0.52, p<0.05) were significantly increased in Sim and Ato groups, but still lower than those in Sham group. There were no difference between Sim and Ato groups.

Conclusion Both simvastatin and atorvastatin showed amelioration on ventricular remodelling in MI rats. The mechanisms may be associated with their effects of up-regulating non-phosphorylation FoxO3a.

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EFFECT OF SIMVATATIN AND ATORVASTATIN ON FOX03A EXPRESSION AND VENTRICULAR REMOLDING IN POST-MYOCARDIAL INFARCTION RATS

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Objective Accumulating evidence suggests non-phosphorylation FoxO3a play a role in cardiovascular diseases. Therefore we examined the expression of non-phosphorylation FoxO3a in Post-myocardial Infarction Rats, to investigate the effect of simvastatin and atorvastatin on ventricular remodelling and the alternation of non-phosphorylation FoxO3a values.

Method Twenty four h after myocardial infarction by left anterior descending coronary artery ligation, the surviving rats were randomly divided into myocardial infarction group (MI, n=8), simvastatin 20 mg/kg/day treatment group (Sim, n=8) and atorvastatin 10 mg/(kg/d) treatment group (A to, n=8). Sham-operated animals underwent identical surgery except for the coronary artery ligation (Sham, n=10). Four weeks later, the effect of statins on ventricular remodelling was evaluated by detecting changes of left ventricular mass index (LVMI), and collagen volume fraction (CVF) in non-infarction zone (NIZ) with Picric-Sirius Red Polarimetry, also expressions of mRNA and protein of non-phosphorylation FoxO3a were detected respectively by RT-PCR, immunohistochemical staining and western-blot. The data were analysed by SAS 9.1 software.

Result When MI group was Compared with Sham group, the LVMI (2.62±0.16 vs 1.80±0.13, p<0.05), the type I CVF