

$p < 0.05$ ), protein (immunohistochemistry) ( $2.30 \pm 0.52$  vs  $3.45 \pm 0.50$ ),  $p < 0.05$ ) and protein (FCM) ( $36.66 \pm 5.50\%$  vs  $61.56 \pm 11.23\%$ ),  $p < 0.05$ ) in NIZ decreased significantly in MI group. Compared with MI group, the LVMI ( $2.27 \pm 0.08$  vs  $2.62 \pm 0.16$ ),  $p < 0.05$ ) decreased significantly in Ato group, but was higher than those in Sham group ( $p < 0.05$ ); the expressions of FoxO3a mRNA ( $0.47 \pm 0.05$  vs  $0.29 \pm 0.05$ ),  $p < 0.05$ ), protein (immunohistochemistry) ( $2.91 \pm 0.49$  vs  $2.30 \pm 0.52$ ),  $p < 0.05$ ) and protein (FCM) ( $50.64 \pm 9.69\%$  vs  $36.66 \pm 5.50\%$ ),  $p < 0.05$ ) were significantly increased in Ato group, but were lower than those in Sham group ( $p < 0.05$ ).

**Conclusion** Atorvastatin has a protective effect on ameliorating ventricular remodelling in rats induced by MI. The mechanisms of statins antiventricular remodelling could be associated with its effects of up-regulating FoxO3a.

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### EFFECTS OF ATORVASTATIN ON FOXO3A EXPRESSION IN POST-MYOCARDIAL INFARCTION RATS

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**Objective** To assess the effects of atorvastatin on ventricular remodelling in rats after myocardial infarction and to investigate the alternation of the expression of FoxO3a in nuclear of myocardial cells.

**Method** Twenty-four hours after myocardial infarction by left anterior descending coronary artery ligation, the survival rats were randomly divided into myocardial infarction group (MI,  $n=8$ ), atorvastatin 10 mg/(kg d) treatment group (Ato,  $n=8$ ). Sham-operated animals underwent identical surgery except for the coronary artery ligation (Sham,  $n=10$ ). After four weeks, the effects of atorvastatin on myocardial fibrosis were evaluated by detecting changes of left ventricular mass index (LVMI), and the expressions of FoxO3a in non-infarction zone (NIZ) by immunohistochemistry staining, RT-PCR. At the same time, the level of non-phosphorylation FoxO3a was measured by flow cytometry (FCM). The data were analysed by SAS 9.1 software.

**Result** Comparing with Sham group, the LVMI ( $2.62 \pm 0.16$  vs  $1.80 \pm 0.13$ ),  $p < 0.05$ ) was increased significantly in MI group; the expressions of FoxO3a mRNA ( $0.29 \pm 0.05$  vs  $0.57 \pm 0.06$ ),