Results The level of LDH and MDA were significantly higher in L group than those in C group (113 ± 15 vs 69 ± 10 U/L, $p < 0.05$, and 1.88 ± 0.36 vs 0.87 ± 0.25 mmol/l, $p < 0.05$, respectively), and decreased in L+H groups ($p < 0.05$). The level of SOD in L, L+H, and L+Z groups was significantly lower than that in control group ($p < 0.05$). The level of SOD in L+H group is higher than that in L group ($p < 0.05$). The rate of apoptosis and cardiocyte heart rhythm increased significantly and survival rate was significantly lower in L, L+H, and L+Z groups than those in C group ($p < 0.05$). The level of HO-1 mRNA was higher in L, L+H, and L+Z groups than that in C group ($p < 0.01$), among which L+H group was the highest. The level of HO-1, TNF α and NF- κ B in L, L+H, and L+Z groups was also higher than those in C group ($p < 0.05$), among which the level of HO-1 protein in L+H group was the highest, the level of TNF α and NF- κ B was the highest in L+Z group.

Conclusion These data therefore suggested that HO-1 provide critical protection against LPS-induced cardiocyte injury. The protection seemed to be mediated through down-regulation of the activity of NF- κ B.

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HEME OXYGENASE-1 DOWNREGULATE THE ACTIVITY OF NUCLEAR FACTOR NF- κ B AND PROTECT THE DAMAGE OF CARDIOCYTE INDUCED BY LIPOPOLYSACCHARIDE IN RATS

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Objective To determine whether HO-1 played a important role in the protection of cardiocyte in the lipopolysaccharide-induced acute cardiocyte injury model.

Method Cardiocyte was isolated from SD neonate rat, and was enrolled into C group (normal culture), L group (with stimulation of LPS), L+H group (with stimulation of Hemin (inducer of HO-1), followed by LPS), and L+Z group (with stimulation of ZnPP (inhibitor of HO-1), followed by LPS). The levels of LDH, malondialdehyde (MDA), and superoxide dismutase (SOD) were measured. The cell heart rhythm, survival rate and the apoptosis rate were also examined. The expression of nuclear factor κ B (NF- κ B), HO-1, and tumour necrosis factor α (TNF α) were measured with RT-PCR, Western blotting and flow cytometry.