developed pressure (LVDP), the maximum change rate of left ventricular pressure rise and fall (±dp/dtmax) were recorded. The activity of creatine kinase (CK) in coronary outflow, the activity of malonyldialdehyde (MDA) and superoxide dismutase (SOD) in myocardium were detected. The percentage of necrotic area were observed.

**Results** In adult rats, the content of CK (89.48±18.72 U/l vs 115.76±16.72 U/l, p<0.01) and MDA (9.55±3.44 nmol/mg vs 16.84±2.29 nmol/mg, p<0.01) were significantly less in IPC group than those in I/R group. In IPC group, the activity of SOD (584.7±122.62 U/mg vs 429.46±85.24 U/mg), the recovery rate of the left ventricular function, including CO, LVDP and ±dp/dtmax, were much higher than those in I/R group (78.69±9.68% vs 65.10±8.63%, 83.61±4.46% vs 67.23±8.68%, 81.65±8.68% vs 67.89±8.69%, 89.79±7.78% vs 66.79±8.46%, p<0.01). And the percentage of necrotic area were lower in adult IPC group than in I/R group (5.25±4.33 vs 14.75±8.02, p<0.01). But there were no significant changes between IPC group and I/R group in elderly rats (p>0.05). However, there were great significant changes between enhanced IPC group and IR group in elderly rats, the content of CK (88.60±28.52 U/l vs 105.76±9.64 U/l, p<0.01) and MDA (8.38±3.36 nmol/mg vs 16.80±3.06 nmol/mg, p<0.05), the activity of SOD (585.57±78.66 U/mg vs 423.75±86.65 U/mg, p<0.01), the recovery rate of the left ventricular function, including CO, LVDP and ±dp/dtmax, were much higher than those in I/R group (77.99±10.02% vs 66.26±9.78%, 85.59±6.67% vs 73.90±6.68%, 83.87±9.92% vs 68.90±8.68%, 86.01±7.76% vs 70.39±7.98%, p<0.01). The percentage of necrotic area were lower in elderly IPC group than in I/R group (7.95±6.32% vs 15.62±10.56%, p<0.01).

**Conclusion** The effect of IPC on ischaemic reperfusion myocardial of elderly rats was weakened. Prolonged ischaemia was able to resume the protective effect of IPC on elderly rat hearts.