GW23-e1729

THE CHANGES OF CORONARY ARTERY FLOW ARE HELPFUL TO EVALUATE THE DEGREE OF MYOCARDIAL ISCHAEMIA IN ACUTE MYOCARDIAL INFARCTION

doi:10.1136/heartjnl-2012-302920ad.15

Su Rui Juan, Yang Ya. *Beijing Anzhen Hospital Affiliated to Capital Medical University*

Objectives To study the change of coronary artery haemodynamics after acute myocardial infarction in mice, and evaluate the value in judging acute myocardial infarction and the infarction area.

Methods Wild-type (C57BL/6) mice were separated into three groups: sham operation (sham), low ligation group (MI-L), high ligation group (MI-H). Myocardial infarction (MI) was induced by left anterior descending branch ligation, and some haemodynamics parameters of left coronary artery were measured by high resolution ultrasound, including velocity (V1, V2, Vmean), velocity-time integral (VTI) of flow at 2 h (V1-2h, V2-2h, Vmean-2h, VTI-2h),6 h (V1-6h, V2-6h, Vmean-6h, VTI-6h) after MI. Mice were killed at 12h after MI, Troponin I (TNI) and MI area (MIA) were

tested.

Results V1-2h, V2-2h, Vmean-2h and VTI-2h of three groups were measured (shame:V1-2h: 526.70±220.62, V2-2h: 336.11±163.96, Vmean-2h: 299.99±128.33, VTI-2h: 39.66±22.64; MI-L: V1-2h: 278.33±44.90, V2-2h: 188.52±30.09, Vmean-2h: 155.49±23.76, VTI-2h: 20.43±5.366; MI-H: V1-2h:166.98±51.04, V2-2h:107.15 ±33.95, Vmean-2h: 95.40±25.57, VTI-2h: 11.83±2.72;), and they were significantly different between sham and MI-L, sham and MI-H groups (all $p<0.05$), but all of these parameters were without difference between MI-L and MI-H groups. V1, V2, Vmean and VTI were without difference between 2 h and 6 h in the same group. V1-2h, Vmean-2h and VTI-2h were negatively related to infarction area.

Conclusions The haemodynamics parameters of left coronary artery can be measured by high resolution ultrasound, and it is a feasible and reproducible method to evaluate the degree of myocardial ischaemia in acute myocardial infarction.