

tumour and infection. Brachial artery endothelial function of all patients was measured next day after hospital admission. Normal control group consisted of 12 healthy people with age and gender matching. After measuring the inner diameter brachial artery with 7.0 MHz high definition power ultrasound linear array searching unit, reactive engorge test will be done. Distal end of target artery was pressed by pneumatic tourniquet up to 200 mm Hg (1 mm Hg=0.133 kPa), kept on 5 min, then deflated and decompressed. After 1 min later, inner diameter of same part of the brachial artery were measured. After when the inner diameter of brachial artery returned to fundamental numerous, patients took nitro glycerol 0.5 mg sublingually. In 2–5 min time, inner diameter of same part of the brachial artery were measured. Then percentage of changed numerous of inner diameter of brachial artery after pressing and taking nitro glycerol of fundamental numerous were calculated, named endothelium-depended vascular dilatation ($\Delta 1\%$) and none endothelium-depended vascular dilatation ($\Delta 2\%$) respectively.

Result Endothelium-depended vascular dilatation (7.8–5.1%) and none endothelium-depended vascular dilatation (11.6–7.2%) in CHD patients decreased greatly than Normal control group (15.1–3.9%, 23.1–2.7%, $p<0.001$). With the aggravation of heart failure from Class α to Class β , endothelium-depended vascular dilatation (11.6–3.4% vs 7.5–4.9% vs 3.4–3.7%, $p<0.05$) and none endothelium-depended vascular dilatation (18.1–4.8% vs 10.4–6.1% vs 5.2–3.7%, $p<0.05$) decrease markedly.

Conclusion The results suggested that endothelium-depended vascular dilatation and none endothelium-depended vascular dilatation decreased greatly in CHD patients. The vascular endothelial function damaged significantly with the aggravation of heart failure.

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THE CHANGE OF VASCULAR ENDOTHELIUM IN CORONARY HEART DISEASE

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Objective To investigate the change of vascular endothelium in coronary heart disease patients by measuring the function of brachial artery endothelium with high definition power ultrasound.

Method Thirty one coronary heart disease patients with heart failure, 21 males and 10 females were recruited into this study. According to the New York Heart Association (NYHA) classification, patients were divided into Class I ($n=11$), Class α ($n=11$), Class β ($n=9$), and all the patients were excluded from