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THE EFFECTS OF VELVET ANTLER OF DEER ON CARDIAC FUNCTIONS OF RATS WITH HEART FAILURE FOLLOWING MYOCARDIAL INFARCTION

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Objectives Velvet antler of deer (VAD) is a commonly-used kidney-Yang supplementing traditional Chinese medication. According to the heart-kidney-related theory, heart Yang originates in kidney Yang and therefore heart failure due to heart Yang deficiency can be treated by tonifying kidney Yang. In this study, we investigated therapeutic effects of VAD on cardiac functions in rats with heart failure following myocardial infarction. Forty-eight male Wista rats

were subjected either to left coronary artery ligation (N=36) or to sham operation (N=12). One week after the surgery, rats with heart failure received daily treatment of double-distilled water (the HF group), captopril (the HF+CAP group) or velvet antler of deer (the HF+VAD group) by gavage for consecutively 4 weeks, while sham-operated animals (the SHAM group) were administered double-distilled water once daily for 4 weeks. Ultrasonic echocardiography was adopted to examine cardiac structural and functional parameters and serum Brain natriuretic peptide (BNP) concentration was measured using radioimmunoassay. We found that VAD partially reversed changes in cardiac functional parameters and serum BNP levels in rats with heart failure. These results provide evidence for the heart-kidney-related theory of traditional Chinese medicine and demonstrate that heart failure due to heart Yang deficiency can be treated by strengthening kidney Yang. Therefore, VAD might be a potentially alternative and complementary medicine used in the treatment of heart failure.

Methods**Results:****Conclusions**