

## **Comparing the Cardio-protective Effects of Catgut Embedding and Electro Acupuncture Therapy on TaiChong point in Spontaneous Hypertensive Rat**

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Background: the persistent high blood pressure might cause myocardial fibrosis and left ventricular hypertrophy and apoptosis. Finally shorten the life. Objective: we learned from the previous experimental Taichongelectroacupuncture is effective for reducing blood pressure in spontaneously hypertensive rats, but long-term stimulation will make the effect fade in a row. So we designed a short experimental treatment and join discussions. Methods: the 8-week-old male group randomly divided into Spontaneous hypertensive rat group (SHR), pseudo-point electroacupuncture Group (EAS), electro-acupuncture in the treatment group (EAT), pseudo-acupoint embedding Group (CES), embedding therapy group (CET), for 1 week of treatment. With the 8-week-old male WKY (Wistar-Kyoto) as a control group of rats. Treatment group we chose bilateral Taichongpoint(LR-3) for electro-acupuncture and catgut embedding, and recorded their blood pressure with tail cuff. . After sacrifice we took its heart slices, and observed H&E, Masson ' s trichrome staining with TUNEL assay. Free out of the left ventricle and extraction of proteins, by Western blot to observe the proteins of anti-apoptosis and pro-apoptosis proteins and the proteins about hypertrophy or inflammation. Results and discussion: the treatment of the third day, the blood pressure of rats with has decreased significantly, including systolic, diastolic and mean blood pressure in EAT and CET group were significantly lower than SHR and EAS group, and the blood pressure in EAT group was slightly lower than the CET group , but no significant difference between the two groups. At the treatment of the 7th day EAT blood pressure in CET Group continued to decline, and in CET group blood pressure was less than EAT group but no significant difference between the two groups. We observed from the heart tissue biopsy proofed that the electro-acupuncture or catgut embedding on LR-3 can prevent cardiac hypertrophy and apoptosis and fibrosis from hypertension. Western blot analysis was found that the SOD 1 in CET group was significantly increased and apoptotic protein and hypertrophy and apoptosis protein were decreased significantly, and SOD 1 and the induction of effect of PI3K/pPI3K in CET group were better than EAT group.

Keywords: electro-acupuncture, catgut embedding, Taichongpoint(LR-3), SHR, cardiac hypertrophy, apoptosis