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THERAPY WITH CARDIAC CONTRACTILITY MODULATION ELECTRICAL SIGNALS IMPROVES LEFT VENTRICULAR FUNCTION IN RABBITS WITH HEART FAILUREYuan Huabing, Qi Xiaoyong, Pengyungxin Hebei *People's Hospital*

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Objectives This study examined the effects of short-term delivery of cardiac contractility modulation (CCM) electric signals on LV function in rabbits with HF.

Methods In one study, rabbits with the transverse ascending aorta constriction-induced HF were randomised to 12 h of active CCM therapy group or to heart failure (HF) group or to a sham-operated control group. left ventricular myocardium RyR2, CX43 was measured by fluorescent quantitation polymerase chain reaction.

Results In CCM treated rabbits, LVEF increased ($50\pm 4\%$ vs $36\pm 3\%$, $p<0.0001$) compared with HF group and decreased ($50\pm 4\%$ vs $67\pm 5\%$, $p<0.001$) compared with sham-operated control animals. The increase in EF seen with CCM-treated rabbits was accompanied by reduced LV volumes, improved left ventricular systolic pressure (LVSP) and $+LVdP/dt_{max}$. In CCM treated rabbits, the amount of RyR2, CX43 were increased compared with HF group and decreased compared with sham-operated control animals.

Conclusions In rabbits with HF, short-term CCM therapy improves LV systolic function, which is ascribed to the concomitant benefits of CCM therapy on increasing the amount of RyR2, CX43 and improving ventricular excitation-contraction coupling.