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THE EFFECTS OF AEROBIC EXERCISE ON EXERCISE TOLERANCE IN PATIENTS WITH CHRONIC HEART FAILURE

Shen Yu-Qin, Wang Le-Min, Che Lin, Jiang Jin-Fa, Qi Xiu-Qing, Xu Wen-Jun, Deng Bing, Song Hao-Ming, Wen-Wen, Ma, Wen-Lin, Zhang, Xiao-Yu, Zhang, Qi-Ping, Li Guang-He *Department of Cardiology, Shanghai Tongji Hospital, Tongji University, Shanghai, China*

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Objective To study the effects of aerobic exercise on exercise tolerance in patients with chronic heart failure (CHF).

Methods Total of 50 CHF patients were enrolled in the study, left ventricular ejection fraction (LVEF) <0.49 by Doppler echocardiography and were randomly divided into aerobic exercise group (T group) 25 cases and non-aerobic exercise group (non-T group) 25 cases, cardiopulmonary exercise testing (CPET) were performed. The patients of T group executed the aerobic exercise prescription which exercise intensity is decided by anaerobic threshold (AT) before 10W (1 min before) of the oxygen consumption, non-T group required daily activities. After six sessions under supervised aerobic exercise training, the home-based aerobic exercise training began. CPET were reviewed 3 months later respectively.

Results The VO_2 AT, VO_2 peak, peak VO_2/HR , load AT and load peak in patients of T group were increased compared with baseline, the differences of ΔVO_2 AT, ΔVO_2 peak, $\Delta\text{peak VO}_2/\text{HR}$, $\Delta\text{load AT}$ and Δload between two groups were statistically significant ($p < 0.01$ or 0.05); the slope of VE/VCO_2 in patients of T group was decreased compared with baseline, but the slope of VE/VCO_2 in non-T group was increased over baseline, the difference of $\Delta\text{VE}/\text{VCO}_2$ slope between two groups was not statistically significant ($p > 0.05$).

Conclusion After 3 months of aerobic exercise, exercise capacity can be improved in patients with CHF.