Effect of cardiac rehabilitation on cardiovascular risk factors in chronic heart failure patients

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Setting the scene:
To evaluate the effect of cardiac rehabilitation program (CRP) on cardiovascular risk factors in chronic heart failure patients as well as functional capacity and health related quality of life.

What did they do?
The study was conducted on 80 Patients with chronic stable heart failure (HF) (stable on treatment for at least one month), age >18 years old of both sexes with LVEF <40% and New York heart association (NYHA) class II-III on stable treatment for HF coming to the cardiac rehabilitation clinic. All patients were subjected to thorough history taking and physical examination including general health status, body mass index (BMI), waist circumference, heart failure signs, cardiac and carotid murmurs, resting pulse, resting arterial blood pressure, extremities for presence of arterial pulses and orthopedic pathology, neurological abnormalities. Laboratory assessment was done (including glycated hemoglobin (HbA1c) and lipid profile). Prescribed exercise training (2 sessions/week for 8 weeks) was performed for all patients: Warm-up & cool-down: 5–10 min of low level aerobic exercise, stretching. Aerobic exercise: starting at 15–20 min up to 30–45 min using treadmill (1.6–4 km/h, 0% grade) (<25watts) to reach HR: HR rest +20 beats/min at least, with slow increase in the duration and intensity of exercise according to patient’s response and capacity. The formal exercise regimen was supplemented with physical activity counseling as patients are consistently encouraged to accumulate 30–60 min per day of moderate-intensity physical activity on 5 (preferably most) days of the week. On completion of the Cardiac Rehabilitation program (within a week interval), the patients were subjected to thorough history taking and clinical and laboratory assessment including (Smoking status, Functional capacity according to NYHA classification, BP measurement, Heart rate, BMI and waist circumference, HBA1c and Lipid profile), 6 min walk test and MLHFQ. The primary endpoint was to evaluate the effect of cardiac rehabilitation program on cardiovascular risk factors and the secondary endpoint was to stress on its value in improving functional capacity and health related quality of life.
Takeaway message:
Cardiac rehabilitation had a significant improvement of cardiovascular risk factors, functional capacity and Health related quality of life in patients with chronic heart failure.