

Exercise for heart failure inpatients: ERIC-HF programme

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Introduction:

Decompensated Heart Failure (HF) patients are often characterized by dyspnea, fatigue, edema, functional dependence and impairment of performance in activities of daily living (ADL).

Aerobic exercise training (AET) is a well establish cardiac rehabilitation intervention which leads to improvement of symptoms, promotes the functional capacity of the patients and even an increase of exercise tolerance. Although the benefits, exercise is not yet validated for inpatients during the phase of stabilization.

Purpose:

To evaluate the feasibility and safety of an AET program for patients admitted due to decompensated HF: ERIC-HF program

Methods:

Patients are randomized in training group (TG) or control (CG). Data include cardiovascular history, HF history and two functional tools: London Chest of Daily Living Activities (LCADL) and Barthel Index (BI). TG patients performed the ERIC-HF program twice a day for 6 days per week. ERIC-HF program is a supervised AET program, with increasing levels of intensity, divided into 5 stages (respiratory training, gait training and climbing stairs, for progressive duration periods). Vital signs are evaluated before and immediately after the exercise, as well as the Borg Modified Perceived Exertion. CG patients performed physical activity in accordance with their preference, always supervised too . At discharge, all patients perform a six-minute walking test (6MWT) and evaluation of LCADL and BI.

Results:

100 patients were randomized (50 in each group) with na average of age of 71 (±11) years old, 61 are male, 80% are in NYHA class III. At admission, both groups have the same level of functional dependence. TG patients performed a global amount of 573 sessions of exercise. At discharge, TG patients presented lower LCADL score, higher BI score and a 54 meters difference on the 6MWT (statistically significant) which represents a better functional capacity. Absense of adverse events like falls, precordial pain or worsening of clinical state.

Conclusions:

ERIC-HF program is safe and promotes functional capacity. We can also conclude that probably AET is safe and viable, for this kind of patients. No other study of our knowledge, has demonstrated this findings.

	Parameter	LCADL	Barthel Index	6 MWT
Training group	Admission	32	73	x
	Discharge	12	98	288m
Control group	Admission	32	73	x
	Discharge	16	92	233m
Comparison		p=0,006	p=0,038	p=0,032