

BACKGROUND

Center-based cardiac rehabilitation programs (CRP) have shown to reduce morbidity and mortality after an ischemic cardiac event, but their vastly underutilized. Home-based CRP seemed to improve patient's adherence but there is still scarce evidence, especially in elderly patients and women.

PURPOSE

To develop a holistic home-based CRP for ischemic heart disease patients. Evaluate its safety and its impact on functional capacity, adherence to a heart-healthy lifestyle and quality of life.

METHODS

The 8-week home-based CRP will include 60 patients (50% women) with no age limit who have suffered an acute myocardial infarction in the previous 3 months, with LVEF $\geq 40\%$ and a tablet/mobile device. The CRP (Figure 1) includes 3 weekly exercise sessions combining tailored aerobic and strength training and 1 weekly educational session focused on lifestyle habits, therapeutic adherence, and patient empowerment.



Figure 1: Scheme of the holistic home-based cardiac rehabilitation programme

RESULTS

- Between January and October 2021, **56 patients were included**: 2 were rejected for presenting ventricular arrhythmias in the initial stress test and 4 due to technological barrier; 14 patients are currently performing the CRP.
- The preliminary results from the 36 patients who have completed the CRP show a **significant increase in functional capacity, muscle strength, weekly training volume, adherence to Mediterranean diet, emotional state (anxiety) and quality of life (Table 1).**
- There have been no complications and patient's adherence has been excellent for both exercise (85%) and educational (80%) sessions.

Table 1: Preliminary results obtained from the first 36 patients who have completed the program. METs: metabolic equivalent of task; HAD: hospital scale of anxiety and depression; Predimed: questionnaire of adherence to the Mediterranean diet; NS: not significant

	PRE	POST	P
Maximal aerobic capacity (METs)	7.9±2.0	10.7±1.9	<0.05
Arm curl test (repetitions)	14.5±3.9	17.9±4.4	<0.05
Sit to stand test (repetitions)	18.8±3.0	23.9±4.1	<0.05
Weekly training volume (METs/week)	1180±650	2450±650	<0.05
HAD positive anxiety test (%)	44	22	NS
HAD positive depression test (%)	45	15	NS
Adherence to Mediterranean Diet (Predimed >8, %)	45	17	NS
Quality of life (EuroQoL 1-10 scale)	6.8±1.2	8.3±1.0	0.11

CONCLUSION

A holistic telematic CRP dedicated to patients after an ischemic cardiac event, including patients of both gender and of no age-limit, seems to be a feasible, safe and effective in improving maximal aerobic capacity, weekly training volume, muscle strength, quality of life, compliance with the Mediterranean diet and emotional state.