Home-based Cardiac Rehabilitation: the patients claim for new strategies but do they adhere?

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Introduction: Cardiac rehabilitation (CR) programs are established interventions to improve cardiovascular health, despite asymmetries in referral. With covid 19 outbreak, cardiac rehabilitation home based (CR-HB) programs emerged as an alternative. However, its adherence and implementation may vary greatly with socio-demographic factors.

Purpose: To assess adherence to the various components of a CR-HB program.

Methods: Prospective cohort study which included patients (pts) who were participating in a centre-based CR program and accepted to participate in a CR-HB after the centre-based CR program closure due to COVID-19. The CR-HB consisted in a multidisciplinary digital CR program, including: 1.patient clinical and exercise risk assessment; 2.psychological tele-appointments; 3. online exercise training sessions; 4.structured online educational program for patients and family members/caregivers; 5. follow-up questionnaires; 6. nutrition tele-appointments; 7. physician tele-appointments

Adherence to the program was assessed by: drop-out rate; number of exercise sessions in which each patient participated; number of educational sessions attended and a validated questionnaire on therapeutic adherence (composed of 7 questions with minimum punctuation of 7 and maximum of 40 points).

Results: 116 cardiovascular disease (CVD) pts (62.6 ± 8.9 years, 95 males) who were attending a Centre-based CR program were included in a CR-HB program. Almost 90% (n = 103) of the participants had coronary artery disease; 13.8% pts had heart failure; the mean LVEF was 52 ± 11%. Regarding risk factors, obesity was the most common risk factor (74.7 %) followed by hypertension (59.6%), family history (41.8%), dyslipidaemia (37.9%), diabetes (18.1%), and smoking (12.9%).

Ninety-eight pts (85.5%) successfully completed the program. Almost half (46.9%) of the participants did at least one online exercise training session per week. Among the pts who did online exercise training sessions, 58% did 2-3 times per week, 27% once per week and 15% more than 4 times per week.

The pts participated, on average, in 1.45 ± 2.6 education sessions (rate of participation of 13,2%) and therapeutic adherence was high (39,7 ± 19; min 35-40).

Regarding educational status of the pts, 33 pts (45,2%) had a bachelor degree. These pts tended to participate more in exercise sessions (1,7 ± 1,7 vs 1,2 ± 1,4 sessions per week) and in education sessions (2.13 vs 1.6), although this difference was not statistically significant. The therapeutic adherence did not vary with patients' level of education.

Conclusion: Our results showed that a high percentage of patients completed the program and almost half were weekly physically active. However, in regard to educational sessions, the degree of participation was much lower. Educational status seemed to correlate with a higher degree of participation and, in the future, patient selection might offer better results in these kinds of programs.