



LETTER TO THE EDITOR

Letter to the Editor regarding “Suboptimal control of cardiovascular risk factor control in myocardial infarction survivors in a cardiac rehabilitation program”



Carta ao editor relativa ao artigo «Controlo subótimo de fatores de risco cardiovasculares em indivíduos com enfarte agudo do miocárdio submetidos a um programa de reabilitação cardíaca»

We refer to the article by Vasco et al. recently published in the *Journal* about the experience of a single cardiac rehabilitation (CR) center, concerning cardiovascular (CV) risk control in post-myocardial infarction (MI) patients enrolled in a phase II CR program.¹

In their article, the authors state their difficulty in controlling CV risk factors in post-MI patients, reporting that at the end of the phase II CR program only 17% had achieved the low-density lipoprotein cholesterol (LDL-C) targets recommended in the European Society of Cardiology (ESC) guidelines, namely LDL-C less than 55 mg/dl and an at least 50% decrease from the baseline level.² The authors also declare that only 28% of the enrolled patients achieved either of the mentioned targets.¹

In this letter, we report on the experience of the Leiria Hospital Center CR unit, highlighting that in the analysis of our first patient series in which 68 patients had finished the phase II program, 66% achieved both ESC guideline LDL-C targets and 82% achieved one or other of the two targets.

Regarding glycated hemoglobin (HbA1C) levels, Vasco et al. state that in the 26% of the patients in their analyzed population who were diabetic, 51% achieved an HbA1C value lower than 6.5%.

In our CR unit, regarding the same analysis, we found an equal percentage of diabetic patients but 90% of them achieved an HbA1C value of less than 6.5% by the end of the program.

Our study sample included 93 patients, with a mean baseline LDL-C of 119.4 mg/dl, 68 of whom had a mean LDL-C value of 61.7 mg/dl at the end of the phase II program.

The article by Vasco et al. does not permit a detailed analysis of the rehabilitation program that serves the population under discussion, but as the authors effectively admit,

their results are not as expected and are much less than desired.

In our series, with clearly better results, the rehabilitation program has a strong motivational, relaxation and teaching component, achieved in group classes and specialized sessions, particularly concerning psychology.

An additional factor that may help to explain our better results is the use in a large subset of patients of a telemonitoring program, which aims for closer monitoring of patients through a special smartphone app.^{3,4}

By requesting the publication of this letter, we only intend to show that despite all known difficulties and barriers, an effective cardiac rehabilitation program with a strong educational and motivational component may lead to better results. Recognition of these better results will stimulate the team as well as motivate patients to achieve the recommended goals, which will truly modify the natural history of the disease.^{5,6}

Conflicts of interest

The authors have no conflicts of interest to declare.

References

1. Silva V, Vilela EM, Campos L, et al. Suboptimal control of cardiovascular risk factors in myocardial infarction survivors in a cardiac rehabilitation program. *Rev Port Cardiol.* 2021;40:911–20.
2. Visseren LJJF, Mach F, Smulders YM, et al. 2021 ESC Guidelines on cardiovascular disease prevention in clinical practice: developed by the Task Force for cardiovascular disease prevention in clinical practice with representatives of the European Society of Cardiology and 12 medical societies with the special contribution of the European Association of Preventive Cardiology (EAPC). *Eur Heart J.* 2021;42:3227–337.
3. Fonseca-Pinto R, Silva E, Martinho R. MOVIDA.eros: an eHealth Solution for Cardiac Rehabilitation Programs. 2020 43rd international convention on information, communication and electronic technology (MIPRO); 2020. p. 361–4.
4. Cabral M, Santos R, Januario F, et al. Hybrid cardiac telerehabilitation program as a potential strengthening factor in the quality of life in patients with coronary heart disease: a retrospective single-centre analysis. *Eur Heart J.* 2021;42:1.
5. Abreu A, Mendes M, Dores H, et al. Mandatory criteria for cardiac rehabilitation programs: 2018 guidelines from the Portuguese Society of Cardiology. *Rev Port Cardiol.* 2018;37:363–73.

<https://doi.org/10.1016/j.repc.2022.05.007>

0870-2551/© 2022 Sociedade Portuguesa de Cardiologia. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

6. Vilela EM, Ladeira-Lopes R, Joao A, et al. Current role and future perspectives of cardiac rehabilitation in coronary heart disease. *World J Cardiol.* 2021;13:695–770.

Alexandre Antunes^{a,b,c}, Margarida Cabral^{b,*},
João Morais^{a,b,c}

^a *Cardiac Rehabilitation Unit, Leiria Hospital Centre, Leiria, Portugal*

^b *Division of Cardiology, Leiria Hospital Centre, Leiria, Portugal*

^c *ciTechCare (Centre for Innovative Care and Health Technology), Polytechnique, Leiria, Portugal*

* Corresponding author.

E-mail address: anamargaridacabral@outlook.pt
(M. Cabral).