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EDITORIAL COMMENT

Physical activity after coronary revascularization

Atividade física após revascularização coronária

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Sedentary lifestyle is a reversible risk factor for cardiovascular disease (CVD) and CVD mortality.[1,2] Conversely, regular physical activity (PA) reduces vascular mortality by 20-30% in healthy individuals and in patients with coronary artery disease (CAD).[2,3] In this context, PA leads to significant improvements in prognosis, particularly in CAD patients with or without intervention.

PA increases fitness and improves mental health, as well as exerting a positive effect on various risk factors, including hypertension, LDL cholesterol and triglyceride levels, diabetes and overweight.[4,5] The improvements resulting from PA are independent of and additional to those of drugs.

In their study published in this issue of the *Journal*,[6] Acar et al. analyze the factors influencing PA in patients who have undergone coronary revascularization. In a population in which most patients (77%) were inactive, the parameters influencing sedentary habits on multivariate analysis were low education level and lack of regular follow-up.

The first point to be noted in this study is the low level of regular PA in these patients (only 23%). Bearing in mind the known benefits of PA, this means that intervention in this area could significantly improve prognosis of CAD patients.

An interesting finding in this paper is that, counter-intuitively, age, body mass index, functional status and comorbidities presented no significant relation with PA levels. The sample is of reasonable size (202 patients), but not large, and it is plausible that the results would be different with a larger sample. But in the present study, all patients – young and old, normal weight and obese, in high or low functional classes, with or without comorbidities – presented similar levels of PA.

This implies that to achieve a physically active lifestyle, more important than physical capacity is awareness of the benefits of exercise (which is more likely with a higher education level) and willingness to make the effort, even with physical limitations.

Employment status did not determine PA levels: patients who had retired presented similar PA levels to those still in employment, and, paradoxically, unemployment was associated with less PA (p=0.001).

Physicians cannot change patients' educational level, but, with time and dedication, patients can be informed of the benefits of PA and persuaded to increase their exercise levels.

At the same time, as the study shows, regular normal follow-up visits are important for maintaining good PA levels. It thus makes sense to maintain close follow-up of patients after a coronary revascularization procedure. It is vital to maintain appropriate medicines, but it is also important to maintain or achieve adequate levels of PA.

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In this context, clinicians' workload should be adjusted in order to permit frequent follow-up visits for patients after coronary revascularization, as well as to provide sufficient time to ensure that patients follow a PA program, if necessary by contacting missing patients or their families. A complete medical team, including nurses, nutritionists and cardiovascular specialists, are of particular value in this regard.

It makes no sense to invest in the best and most expensive technologies, like coronary artery bypass grafting or multiple percutaneous coronary intervention, and then to abandon the patient without using less costly but effective measures, such as appropriate medication and PA programs, thereby risking losing the previous investment.

I believe that the best way to obtain a good level of PA after coronary revascularization is to include the patient in a comprehensive cardiac rehabilitation program (CRP) as soon as possible after the procedure.

It is known that after a coronary intervention patients are more willing to adopt healthier lifestyles, reducing smoking and alcohol consumption and making efforts to have a more balanced diet.[7] This is a good opportunity to increase PA levels, ideally beginning with a CRP.

Despite the reported benefits of CRPs in CAD patients, these programs are scarce and unavailable to most patients. In a 1998 survey the overall admission rate of CAD patients to a CRP in Portugal was only 0.7%.[8] The number of cardiac rehabilitation centers in Portugal increased between 1998 and 2014 from seven to 22 (12 public and 10 private, most in the Lisbon and Porto areas).[9] But 22 centers, not evenly distributed throughout the country, are insufficient for the needs of the large number of CAD patients who undergo coronary intervention. It can be concluded that CRPs are a health area with considerable room for improvement.

The present paper, raising the issue of PA after coronary intervention and its determining factors, deserves special attention.

Conflicts of interest

The author has no conflicts of interest to declare.

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