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Editorial

Can physical exercise contribute to the treatment of breast cancer?

O exercício físico pode contribuir no tratamento do câncer de mama?

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Cancer is one of the leading causes of death worldwide, with more than 9 million deaths in 2018 [1,2]. In Brazil, it is estimated that between 2020 and 2022 there will be 625,000 new cases of cancer, and of these, 65,000 will be due to breast cancer [2].

Breast cancer is the deadliest cancer for women in Brazil [2]. Despite its incidence being higher in developed countries, the relative mortality is higher in developing countries [3]. Among the causes is access to qualified health services, health policies for women with cancer, and health education for the population.

After diagnostic confirmation, several factors can affect the quality of life of people with breast cancer: psychological factors (stress, anxiety, and fear), risks during the surgical procedure (cardiac arrest, thrombosis, and hemorrhage), post-surgical (time of hospitalization, loss of muscle mass, reduced functional capacity) and the pharmacological treatment itself, which can result in cardiotoxicity [4].

Given the changes listed, the practice of physical exercise becomes essential for this population. The fourth 2021 edition of the *Revista Brasileira de Fisiologia do Exercício* brought a study with the objective of reviewing the evidence for the use of physical exercise in reducing cancer-related fatigue and increasing cardiorespiratory capacity [5]. The authors suggest that regular physical exercise should be encouraged before cancer diagnosis and during all stages of cancer treatment. One of the reasons is that together with smoking

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cessation and other risk factors they allow the reduction of cardiotoxicity induced by pharmacological treatment. In addition, when done individually and under the supervision of an exercise professional, it produces superior results in cardiorespiratory capacity, reduced fatigue [4], increased survival, decreased anxiety [6], and lower risk of cancer recurrence [7].

Despite the effectiveness of physical exercise treatment, there are barriers to its application, especially in women with breast cancer. Kraschnewski *et al.* [8] describe the importance of raising awareness among patients, mainly due to the physical and emotional barriers faced during periods of personal illness. Motivation plays a fundamental role in the acquisition of treatment, and one of the ways to achieve it is to consider the preference of the type of exercise, self-efficacy, and self-report [9]. In addition, high motivation rates can contribute to better short and long-term results due to greater adherence and permanence in multi-professional treatment.

It is still necessary to further investigate the causal relationship of current impacts in clinical contexts, especially about patient survival. It is known that a safe approach considers the vicious cycle of fragility [10]. This cascade is related to four main pillars that include malnutrition, sarcopenia, decreased physiological reserve that are associated with intrinsic factors such as hormonal dysregulation, inflammation, coagulation, and insulin resistance, leading to decreased power and energy supply. Both factors are directly related to the severity and mortality of patients with breast cancer and physical exercise acts as the main adjuvant in combating the bases of its genesis.

We believe that stratification of functional groups and individualization of treatment are at the heart of effective treatment. Therefore, it is necessary to consider four fundamental pillars: functionality, underlying disease, acute complications, and evolution of the critical illness. Is the patient at any level of palliation? If yes, which phase of palliative care? Understanding these factors is important for establishing functional goals and objectives.

Understanding the role of physical exercise and the nuances of its prescription in the management of breast cancer will allow health professionals and managers to learn about this important ally in the treatment of a group with expressive size and growth.

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