

SARCOPENIA AS A PROGNOSTIC FACTOR IN BREAST CANCER

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RESUMO

Breast cancer remains one of the main causes of morbidity and mortality among women worldwide, representing an important public health problem due to its high incidence, impact on quality of life, and costs associated with treatment. Despite therapeutic advances, the clinical heterogeneity of the disease imposes challenges in prognostic stratification and in the individualization of care. In this context, the identification of additional factors that influence clinical outcomes becomes essential. Sarcopenia, characterized by the progressive loss of muscle mass and function, has emerged as a potential prognostic biomarker in oncology patients, being associated with worse clinical outcomes, such as increased mortality and reduced survival. This study aimed to analyze the role of sarcopenia as a prognostic factor in patients with breast cancer. This is a narrative literature review conducted in the PubMed database, including studies published between 2020 and 2026. The descriptors “sarcopenia” AND “breast cancer” were used. Original articles available in full and in the English language, which addressed the association between sarcopenia and clinical outcomes in patients with breast cancer, such as mortality and survival, were included. Studies unrelated to the topic, duplicate publications, case reports, editorials, and studies with insufficient methodological information were excluded. After screening titles and abstracts, studies considered relevant were read in full. In this context, 10 studies were selected for qualitative analysis, including systematic reviews, cohort studies, observational analyses, and Mendelian randomization studies that investigated the relationship between sarcopenia and breast cancer prognosis. The literature shows that sarcopenia constitutes an independent prognostic factor and a marker of systemic vulnerability in patients with breast cancer. Its presence is associated with increased mortality, with hazard ratios ranging from 1.30 to 1.50, representing an increase of up to 50% in the risk of death. The prevalence of this condition in this population ranges from 20% to 40%, according to the diagnostic criteria adopted. In addition, sarcopenia is associated with worse overall survival and a higher incidence of treatment-related toxicity. However, differences in diagnostic criteria for sarcopenia limit the standardization of findings. The pathophysiological mechanisms involved include chronic inflammation, oxidative stress, alterations in energy metabolism, and increased protein degradation, involving pathways such as NF- κ B, myostatin, and AMPK. Furthermore, mitochondrial dysfunction contributes to the progression of muscle loss and may impair therapeutic response. Sarcopenia is an important prognostic marker for cancer, being associated with mortality and increased therapeutic toxicity. Its early identification may enhance risk stratification and favor more individualized therapeutic approaches, reinforcing the importance of body composition assessment as a strategic component in comprehensive oncological care.

Palavras-chave: Sarcopenia Breast Cancer Prognosis.