Original Article

Prevalence and prognosis of sarcopenic dysphagia in adult and older cancer patients: an integrative review

Prevalência e prognóstico da disfagia sarcopênica em pacientes adultos e idosos com câncer: revisão integrativa

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ABSTRACT

Introduction: Sarcopenic dysphagia has emerged as a clinically relevant condition in adult and older cancer patients due to the association between loss of skeletal muscle mass and function and impaired swallowing. The aim of this study was to critically analyze the available evidence regarding the prevalence and prognosis of sarcopenic dysphagia in adult and older cancer patients. **Methods:** An integrative literature review was conducted using structured searches in the SciELO, PubMed, MEDLINE, LILACS, and ScienceDirect databases. Controlled and uncontrolled descriptors (DeCS/MeSH) were combined using the Boolean operators AND and OR. Studies published between January 2015 and October 2025 were included. **Results:** Out of the 25 studies identified, five met the eligibility criteria. The findings indicate that sarcopenic dysphagia is associated with reduced swallowing muscle strength, worsening nutritional status, increased incidence of postoperative dysphagia, and prolonged recovery time. However, data regarding prevalence remain limited and heterogeneous. **Conclusion:** Current evidence suggests that sarcopenic dysphagia is a relevant condition among cancer patients and is associated with poorer functional and nutritional prognosis. Nevertheless, the scarcity of specific studies and the methodological heterogeneity observed in the literature prevent the establishment of consolidated prevalence estimates, highlighting the need for more robust investigations.

RESUMO

Introdução: A disfagia sarcopênica tem emergido como condição clinicamente relevante em pacientes oncológicos, especialmente em adultos e idosos, devido à associação entre perda de massa e função muscular esquelética e comprometimento da deglutição. O objetivo deste estudo foi analisar criticamente as evidências disponíveis acerca da prevalência e do prognóstico da disfagia sarcopênica em pacientes adultos e idosos com câncer. **Método:** Realizou-se uma revisão integrativa da literatura, com busca estruturada nas bases SciELO, PubMed, MEDLINE, LILACS e ScienceDirect. Foram utilizados descritores controlados e não controlados (DeCS/MeSH) combinados por operadores booleanos AND e OR. Foram incluídos estudos publicados entre janeiro de 2015 e outubro de 2025. **Resultados:** Dos 25 estudos identificados, cinco atenderam aos critérios de elegibilidade. Observou-se que a disfagia sarcopênica está associada à redução da força dos músculos de deglutição, piora do estado nutricional, maior incidência de disfagia pós-operatória e aumento do tempo de recuperação. Entretanto, os dados sobre prevalência ainda são limitados e heterogêneos. **Conclusão:** as evidências sugerem ocorrência relevante da disfagia sarcopênica na população oncológica, associada a pior prognóstico funcional e nutricional. Contudo, a escassez de estudos específicos, a heterogeneidade metodológica e a ausência de padronização diagnóstica impedem estimativas consolidadas de prevalência, reforçando a necessidade de investigações mais robustas.

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INTRODUCTION

Advances in cancer treatment have contributed to increased patient survival, but complications arising from the disease and the therapies used remain determining factors in quality of life and prognosis. According to Wakabayashi & Sakuma[1], among these complications, sarcopenia and dysphagia stand out due to their high prevalence and direct impact on functionality, nutritional status, and response to antineoplastic treatment.

According to Prado et al.[2], the presence of sarcopenia in cancer patients is associated with an increased risk of chemotherapy toxicity, reduced treatment tolerance, poorer postoperative recovery, and decreased survival. Concomitantly, dysphagia, which is difficulty swallowing, compromises food and water intake, increasing the risk of malnutrition and pulmonary complications, such as aspiration pneumonia.

Swallowing consists of several stages, including oral intake, mastication for bolus formation, and the subsequent transport of the bolus through the pharynx and esophagus. Dysphagia occurs when there is a change in any of these stages. Its most common symptoms are aspiration and accumulation of residues. Aspiration occurs when saliva, food, or liquids deviate from the correct path and end up entering the larynx and trachea[3]. According to Freitas[4], swallowing is a complex process that involves the coordinated work of muscles and nerves. When this mechanism fails, the individual may experience choking, coughing during meals, a feeling of food stuck in the throat, a wet voice after swallowing, and, in severe cases, pulmonary aspiration.

Muscle strength involved in swallowing, including the masticatory and other skeletal muscle groups, may be reduced. This condition is still underrecognized in clinical practice, as there are no well-established diagnostic criteria or standardized assessment tools[5].

When these two conditions coexist, sarcopenic dysphagia occurs, which is characterized by loss of overall and oropharyngeal muscle mass and function. It has direct repercussions on swallowing efficiency. In this situation, clinical and nutritional risks are increased, especially in adults and elderly people with cancer, a population already vulnerable to metabolic and inflammatory changes resulting from the disease itself and its treatment[6,7].

Although sarcopenia and dysphagia are widely described in the literature in isolation, there are still few studies that specifically investigate sarcopenic dysphagia as a clinical entity in the oncological population. Furthermore, there is methodological heterogeneity, a lack of standardization in diagnostic criteria, and a lack of syntheses that consolidate data on the prevalence and prognosis of this condition in cancer patients. This scenario highlights the need for critical analysis of the available evidence.

Given this, the present study aims to critically analyze the available evidence on the prevalence and prognosis of sarcopenic dysphagia in adult and elderly patients with cancer.

METHODS

This was an integrative review of the literature, with a descriptive and analytical approach. This design was chosen because it allows for the inclusion and synthesis of studies with different methodological approaches (including observational studies, case reports, and reviews).

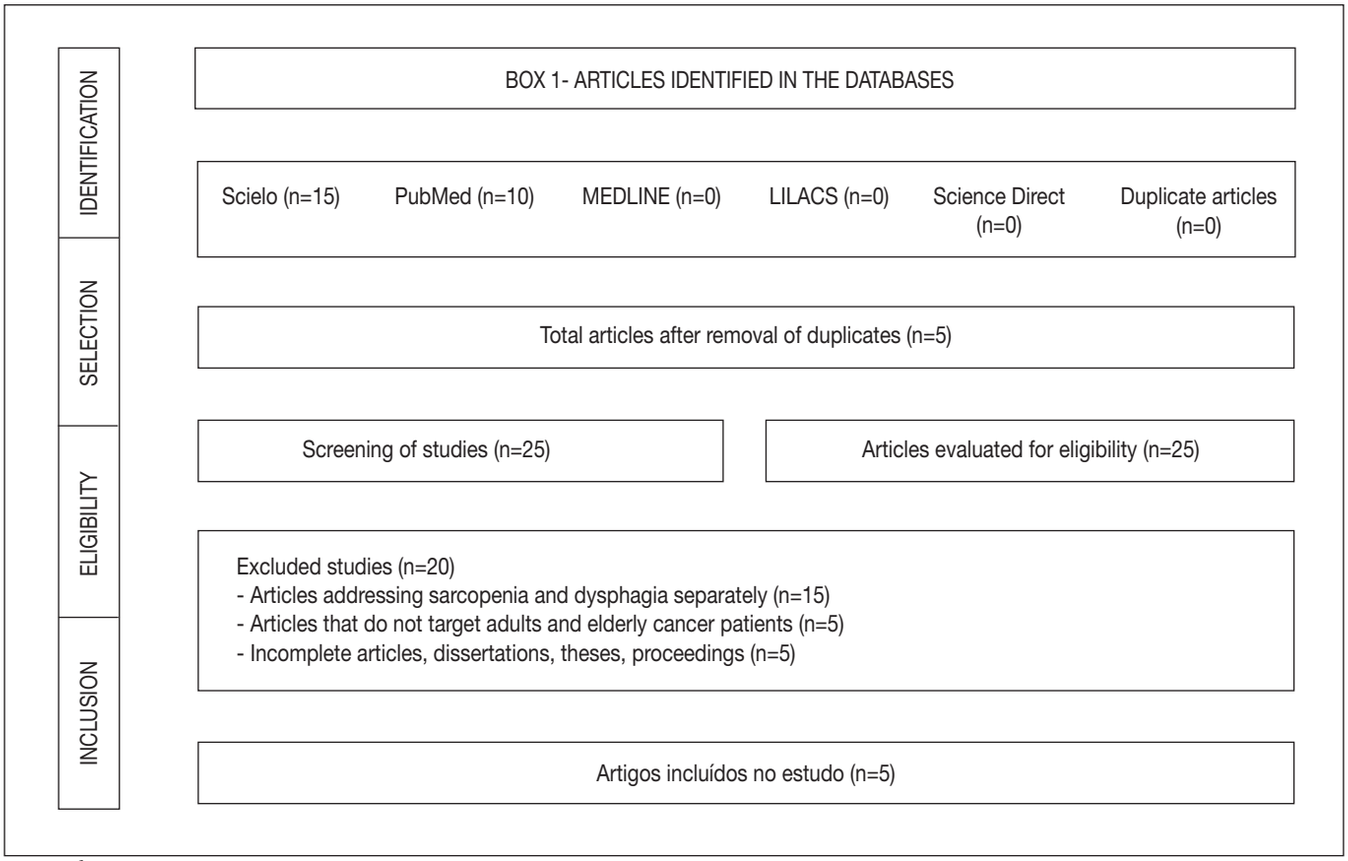
The review was guided by the following question: "What is the prevalence and prognosis of sarcopenic dysphagia in adult and elderly patients with cancer?". The search was conducted in the SciELO, PubMed, MEDLINE, LILACS, and ScienceDirect databases. Controlled and uncontrolled descriptors (DeCS/MeSH) were used, combined by boolean operators AND and OR, adapted to the specificities of each database. The strategy included combinations such as: ("sarcopenic dysphagia" OR "sarcopenia" AND "dysphagia") AND ("cancer" OR "neoplasms") AND ("adults" OR "aged").

Studies published between January 2015 and October 2025 in Portuguese, English, or Spanish involving adult or elderly populations with cancer were included. Systematic reviews and meta-analyses were included when they contributed to conceptual or prognostic understanding, and their findings were analyzed descriptively, without treatment as consolidated prevalence estimates.

The selection was done in two stages: screening by title and abstract, followed by a full reading of the eligible texts. The analysis of the studies was conducted in a thematic and descriptive manner, considering the methodological design, the population studied, the diagnostic criteria adopted, and the main findings related to prevalence and prognosis.

RESULTS

Of the 25 articles selected, 15 were found in SciELO, 10 were obtained from PubMed, and no articles on the subject were found in MEDLINE, LILACS, or ScienceDirect (Box 1). After applying the exclusion criteria, five articles were selected for the study, all in English, organized in Table 1.



n = sample size.

Table 1 – Description of the studies analyzed

Title	Article title translation (in Portuguese)	Author	Study 0bjective	Swallowing changes in elderly people with sarcopenic dysphagia	Data collection tool	Main results
Clinical significance of sarcopenic dysphagia for patients with esophageal cancer undergoing esophagectomy: a review[3]	Significado clínico da disfagia sarcopênica para pacientes com câncer de esôfago submetidos à esofagectomia: uma revisão	Oguma J, Ozawa S, Ishiyama K, Daiko H.	To evaluate reports linking esophagectomy for esophageal cancer, dysphagia, and sarcopenia.	Sarcopenia related to swallowing muscles, such as the geniohyoid muscle and tongue.	The meta-analysis was performed using Review Manager software.	Esophageal cancer, which is a refractory cancer, has seen improved treatment outcomes.
Impact of presarcopenic dysphagia on 1-year mortality after videofluoroscopic swallowing study in patients with cancer[8]	Impacto da disfagia pré-sarcopênica na mortalidade em 1 ano após Estudo videofluoroscópico da deglutição em pacientes com câncer	Moriyama T, Hachisuka A, Matsusihima Y, Tokunaga M, Hori R, Tashima H, et al.	Investigating the impact of presarcopenic dysphagia on mortality.	Some people with low skeletal muscle mass experience a decline in swallowing function.	Statistical analysis.	Increase in patient body weight.
Rehabilitation and nutritional support for sarcopenic dysphagia and tongue atrophy after glossectomy: a case report[9]	Reabilitação e suporte nutricional para disfagia sarcopênica e atrofia de língua após glossectomia: relato de caso	Hashida N, Shamoto H, Maeda K, Wakabayashi H, Szuzuki M, Fujii T.	Analyze case report of sarcopenic dysphagia (rehabilitation and nutritional support).	The dysfunction is related to long-term weight loss and reduced body mass index.	Case report.	Sarcopenia and reconstructed tongue atrophy can cause severe long-term dysphagia after subtotal glossectomy.

Continuous Table 1 – Description of the studies analyzed

Title	Article title translation (in Portuguese)	Author	Study 0bjective	Swallowing changes in elderly people with sarcopenic dysphagia	Data collection tool	Main results
The prevalence and prognosis of sarcopenic dysphagia in patients who require dysphagia rehabilitation[10]	A prevalência e o prognóstico da disfagia sarcopênica em pacientes que requerem reabilitação de disfagia	Wakabayashi H, Takahashi R, Murakami T.	To evaluate the prevalence and prognosis of sarcopenic dysphagia in patients who require dysphagia rehabilitation.	Difficulty swallowing due to loss of muscle mass and function in the skeletal and swallowing muscles throughout the body.	Research.	Sarcopenic dysphagia was independently associated with impaired swallowing function at discharge
Association of preoperative sarcopenia with postoperative dysphagia in patients with thoracic esophageal cancer[11]	Associação de sarcopenia pré-operatória com disfagia pós-operatória em pacientes com câncer de esôfago torácico	Mayanagi S, Ishikawa A, Matsui K, Matsuda S, Irino T, Nakamura R, et al.	Clarifying the relationship between clinical characteristics of dysphagia after esophagectomy and preoperative sarcopenia.	One of the causes of swallowing difficulties is weight loss and skeletal muscle atrophy.	Case reports.	Sarcopenic patients with esophageal cancer develop postoperative dysphagia more frequently than non-sarcopenic patients.

DISCUSSION

Sarcopenic dysphagia in cancer patients is strongly associated with loss of skeletal muscle mass and function (including muscles related to swallowing), worsening nutritional status, and has a negative impact on functional recovery and prognosis[7]. Shimizu et al.[12] report that patients with reduced protein and calorie intake had a higher risk of dysphagia and worsened performance in functional tests. However, they reinforce the importance of early nutritional care, including the use of high-protein supplements and oropharyngeal muscle rehabilitation exercises.

The studies analyzed ranged from observational studies and case reports to meta-analyses, reinforcing both the clinical relevance of the phenomenon and the methodological heterogeneity of the available literature.

Silva et al. [13] state that the deterioration of swallowing function is poorly investigated in patients with cancers located outside the head and neck regions or the upper gastrointestinal tract. Among individuals with oncological diseases, this alteration can occur in different types of cancer, being most frequently observed in those affecting the head and neck region, in addition to the central nervous system.

Based on the five studies included (Table 1), it was observed that sarcopenic dysphagia in cancer patients is strongly associated with loss of skeletal muscle mass and function, including muscles involved in swallowing. This loss leads to deterioration of swallowing function, worsening nutritional status, and a negative impact on the functional prognosis of these patients[8].

Wakabayashi et al.[10] stated that sarcopenic dysphagia tends to present a more severe degree of impairment than other types of dysphagia. Therefore, treatment should involve a comprehensive rehabilitation process, with an emphasis on strengthening exercises for both the muscles responsible for swallowing and the overall musculature, in addition to intensive nutritional intervention aimed at increasing muscle mass and strength. According to Maeda et al.[14], sarcopenic dysphagia should be checked in elderly patients with cancer when there is significant loss and decrease in overall muscle function. Wakabayashi et al.[15] point out that cancer-induced sarcopenia, caused by both the catabolic effect of the tumor and chemotherapy treatment, compromises skeletal muscles and muscles involved in swallowing, such as the genioglossus and masseter.

All the studies included reinforced that the loss of skeletal muscle mass, especially in the muscles of the tongue and pharynx, directly compromises the efficiency of swallowing. Oguma et al.[3] highlight that sarcopenia contributes to dysphagia by affecting both the strength and coordination of the swallowing muscles.

Sarcopenia has been associated with prolonged loss of swallowing ability, delayed rehabilitation, and worsening quality of life[15,16]. In some cases, as shown by Oguma et al.[3], functional impairment persisted for weeks, requiring nutritional support via feeding tube and intensive rehabilitation before hospital discharge. These data reinforce that sarcopenic dysphagia can be considered a marker of poor prognosis in cancer patients, being associated with malnutrition and

longer hospital stays. The findings suggest that nutritional status plays a decisive role in maintaining muscle strength and functional recovery.

Concerns for quality of life have been gaining importance. Individuals affected by the disease have different physical and psychological conditions and this can lead to eating difficulties, interfering with self-esteem and leading to isolation. Given these facts, a multidisciplinary team including speech therapists, physical therapists, nutritionists, and oncologists is essential to minimize the effects and improve the prognosis of patients.

The studies analyzed had common limitations: small sample sizes, heterogeneity of diagnostic criteria for sarcopenia and dysphagia, and lack of standardization in assessment methods. In addition, there was a predominance of case reports and small series, which limits the extrapolation of results to the general oncology population. Despite this, all authors agree on the need for early screening and interdisciplinary management.

CONCLUSION

The results highlight the limited number of available studies addressing the prevalence of sarcopenic dysphagia in adult and older cancer patients, demonstrating a significant gap in the scientific literature. Current evidence indicates that the loss of skeletal muscle mass and function, including muscles involved in swallowing, has a direct impact on nutritional status, functional capacity, and clinical prognosis in this population, constituting a marker of clinical severity.

There is a consensus regarding the importance of an integrated therapeutic approach combining oropharyngeal muscle rehabilitation, global muscle strengthening, and intensive nutritional support, with emphasis on adequate protein and caloric intake. Early and coordinated intervention by a multidisciplinary team (including speech therapists, nutritionists, physical therapists, and oncologists) is essential to prevent complications and improve functional recovery and quality of life.

However, methodological limitations such as small sample sizes, heterogeneity of diagnostic criteria, and lack of standardized assessment tools restrict the generalizability of current findings. Future studies with more robust designs are necessary to establish standardized diagnostic and therapeutic protocols and to advance clinical management of sarcopenic dysphagia in cancer patients.

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