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GASTROINTESTINAL SYMPTOMATOLOGY AND NUTRITIONAL INTERVENTIONS IN ONCOLOGICAL PATIENTS UNDER PALLIATIVE CARE, UNDERGOING CHEMOTHERAPY TREATMENT: A SYSTEMATIC REVIEW

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Abstract: **GOAL**: To define what Palliative Care is and what are the most common gastrointestinal symptoms in patients undergoing antineoplastic treatments and correlate the appropriate nutritional intervention to alleviate symptoms, providing better food acceptance and better quality of life. **METHOD:** This is a systematic review study, developed with scientific production indexed in the following electronic databases: LILACS, MEDLINE, SCIELO, PUBMED, and scientific journals. The time frame covered the period between 2008 and 2023 in Portuguese, Spanish and English. **RESULT**: Eight studies were identified that address gastrointestinal symptoms in cancer patients receiving palliative care. **DISCUSSION:** Studies indicate that antineoplastic treatments can generate symptoms such as nausea, vomiting, diarrhea, constipation, oral mucositis, xerostomia, dysphagia, odynophagia and dysgeusia. These symptoms can generate discomfort that has a major impact on reduced food intake, in addition to having a major impact on weight loss due to inappetence or early satiety, which will consequently interfere with the emergence of malnutrition, anorexia, cachexia and physical conditions. limited. **CONCLUSION:** In Palliative Care, nutrition plays a fundamental role, as it fulfills a biopsychosocial role and must provide comfort and quality of life, redefining the value of food so that it becomes a source of pleasure and satisfaction for these patients.

Keywords: Cancer, Palliative Care, Gastrointestinal Symptoms, Nutritional Therapy, Chemotherapy

INTRODUCTION:

Cancer has become one of the main public health problems worldwide. Lifestyle, sedentary lifestyle, smoking, being overweight and exposure to pollutants are some of the factors that favor an increase in cancer incidence and mortality (WILD C.P., et.al, 2020). According to estimates from the National Cancer Institute (INCA/2022), 704 thousand new cases of cancer were predicted for the 2023-2025 period in Brazil.

Excluding non-melanoma skin cancer, the emergence of 483 thousand new cases of cancer is expected, with breast and prostate cancer as the prevalence, which represent 15% of new cases each year (SANTOS, et.al, 2022). Eating is considered a basic activity of daily life, being part of the human being's routine. Nutrition is not only necessary, but also has cultural and emotional value. Providing food and drink is a significant human action of respect for life and care for our fellow humans, playing a prominent role in our society (FERNANDÉZ-ROLDÁN, 2005). Nutrition plays an important role during the treatment of cancer patients, since the progression of cancer and the antineoplastic treatments carried out are directly related to food acceptance. Depending on the location of the tumor, changes in taste, food odor, chewing and swallowing or nutrient absorption processes may occur. The antineoplastic treatment carried out, such as chemotherapy and radiotherapy, promotes changes in the sensory aspect, causing changes in taste and smell; loss of appetite; dysgeusia; mucositis; xerostomia; nausea; vomiting, among others, which may result in pain and discomfort during eating (SALTZ and JUVER, 2014; MIOLA, 2020 and SANTOS et.al, 2022). These factors, isolated or combined, contribute to weight loss, and consequently malnutrition. Malnutrition is responsible for worse clinical outcomes such as poor response to treatment, decreased functional capacity, prolonged periods of hospitalization and consequently worsened quality of life (SILVA, et.al, 2022). Palliative care is indicated for cases in which the underlying disease threatens the continuity of life, with cancer being one of

the diseases eligible for this type of care, with the priority being the prevention and relief of physical, social and spiritual suffering. It can be carried out in conjunction with curative treatment or exclusively, when the disease is already advanced, with the main objective of care being to provide comfort and dignity for individuals and their families. Diet therapy strategies for patients under palliative care in the initial phase of treatment must be based on the patient's nutritional status and the history taken at first contact, thus reducing the adverse effects of treatment and thus providing a better sense of well-being and quality of life. life. However, in the final stage of life, the focus of nutritional intervention must be based on ensuring comfort and relief from suffering, respecting the wishes and desires of patients and their families (DUARTE, 2020). In this context, the nutritionist's work aims to manage the control of gastrointestinal symptoms, and the professional must know the diagnosis, prognosis and life expectancy, and within these aspects, establish together with the multidisciplinary team, patient and their families the most nutritional strategy. indicated (MATSUMOTO, 2012).

The objective of this systematic review is to identify the nutritional status of patients during treatment and the most common gastrointestinal symptoms, recording the effect of the nutritional measures that were carried out.

GOAL

To define what proportional Palliative Care is and what the most common gastrointestinal symptoms are in patients undergoing antineoplastic treatments and correlate the effects of appropriate nutritional intervention to alleviate symptoms, providing better food acceptance and better quality of life.

METHOD

This is a systematic review study, developed with scientific production indexed in the following electronic databases: LILACS, MEDLINE, SCIELO, PUBMED, scientific journals using the following descriptors: Cancer, Palliative Care, Gastrointestinal Symptoms, Nutritional Therapy, Chemotherapy. The time frame covered the period between 2008 and 2023 in Portuguese languages.

RESULTS

Eight studies were identified that address gastrointestinal symptoms in cancer patients undergoing palliative care, with a total of 461 patients studied for an average of 4 months, with a mean age of 59 years, 69% female and a higher prevalence of gastrointestinal, breast and lung.

Table 1 describes the studies that make up this systematic review.

DISCUSSION

Studies indicate that side effects during chemotherapy treatment are related to the use of different classes of drugs such as alkylating agents; the platinums; antimetabolites; antitopoisomerases; antimicrotubules; antibiotics and tyrosine kinase inhibitors that directly favor the emergence of gastrointestinal manifestations such as: nausea, vomiting, diarrhea, constipation, mucositis, xerostomia, dysphagia, odynophagia and dysgeusia, in addition to having a major impact on weight loss due to inappetence or early satiety, which will consequently interfere with the emergence of malnutrition, anorexia and cachexia (BRASPEN/SBNEP, 2017; CORADAZZI, et.al, 2019; DUARTE, 2020). According to a study by FERREIRA E SILVA, 2008, limited physical conditions triggered by pain and fatigue cause overload in the use of energy substrates, reducing the reserve of body nutrients,

STUDY	PATIENTS AGE (years)/ GENDER/ TUMOR LOCATION	STUDY DESIGN	TREATMENT/ STUDY TIME	INITIAL NUTRITIONAL STATUS	GASTROINTESTINAL SYMPTOMS OBSERVED
Ferreira e Silva, 2008	N. 13 Over 50. Both genders Total patients 38.4% with breast cancer	Descriptive and exploratory of a quantitative nature	Radiotherapy and chemotherapy alone or mixed. Study 6 months .	Nutritional status by BMI: 76.8% eutrophic or overweight.	Nausea, emesis, fatigue, dysgeusia, constipation, early satiety, xerostomia, oral mucositis, polyuria, dysphagia and oliguria.
Silva et.al, 2010	N.50 Average age 64.5 58% female 42% male. Total patients 48% with stomach tumors lung, cervix.	Prospective quantitative longitudinal clinical trial	Unspecified antineoplastic therapy. Study 3 months	Not mentioned in the study.	Lack of appetite, reduced or increased appetite, dysgeusia, xerostomia, oral candidiasis/ mucositis, gastric fullness, heartburn, nausea, vomiting, dysphagia, odynophagia, diarrhea and constipation.
Cavichiolo et.al, 2017	N.47 Average age 61.51. 55.32% male 44.68% female. Total patients 21.28% with lung tumors and 19.15% breast.	Retrospective, exploratory descriptive	No description of the type of treatment. Study 2 months	Nutritional status classified by ASG-PPP, 51.06% with moderate malnutrition, 42.55% with severe malnutrition.	Anorexia, dry mouth, constipation, early satiety and nausea.
Ralph et.al, 2021	N.105 Average age 54. 52.4% female 47.6% male. Total number of patients with tumors in upper gastrointestinal tract (25.7%) breast (16.2%).	Descriptive, transversal with a quantitative approach	Undergoing chemotherapy treatment Study 3 months	Not mentioned in the study.	Pain, fatigue, nausea, depression, anxiety, drowsiness, lack of appetite, malaise and shortness of breath.
SC, *Kormann et.al, 2021*	N. 100 Average age 55.91. 90% female Total patients with higher prevalence of breast, colon and lung cancer tumors.	Cross-sectional and observational	Chemotherapy treatment. Study 6 months.	Regarding BMI, the majority of patients were overweight, with an average weight loss of 6.14%.	Nausea, followed by diarrhea, flatulence, xerostomia, dysgeusia and inappetence.
Maniglia et.al, 2021	N.100 divided into healthy individuals and 50 oncological individuals. Average age 57.8. 90% female gender .	Intervention Study	Chemotherapy treatment. Study 4 months .	According to BMI, among adults and elderly people, the majority were overweight (57%), followed by normal weight (34%).	Change in taste in patients undergoing chemotherapy compared to healthy individuals in a control group.

Menezes et.al, 2022	N.52 Average Age 66.7. Both genders. Total patients' highest prevalence of gastrointestinal tract neoplasms, followed by lung	Descriptive and transversal	All undergoing antineoplastic treatment. Study 8 months.	Prevalence of individuals at risk of malnutrition.	Dysphagia
Oliveira e Rossi, 2023	No. 44 Average age 69.91 52.27% female 47.73% male. In total, 73% of patients were able to locate the primary cancer.	Prospective, exploratory, descriptive and quantitative in nature	Not specified Study 2 months.	In the assessment of nutritional status by BMI for the elderly, there was a prevalence of 46.87% of underweight patients, 37.5% eutrophic and 15.63% overweight or obese.	Constipation (54.55%), anorexia (36.36%), diarrhea (27.27%)

Table 1. SUMMARY OF STUDIES AND RESULTS FOUND

causing difficulty or decreased performance in daily activities such as making culinary preparations and, thus, compromising food intake, and mention the main side effects in their study with patients with breast cancer, using chemotherapy drugs, such as: nausea, vomiting and decreased appetite. The authors report that the symptoms appeared in the first week of treatment, with anorexia, dysgeusia, gastric fullness and xerostomia appearing in the first 12 hours after drug therapy. Regarding nutritional status, patients were classified as eutrophic 38.4%, overweight 38.4% and obese 15.4%. According to a study by CAVICHIOLO et.al. (2017), the nutritional status of patients was assessed using BMI and researchers were able to notice inconsistencies regarding the BMI measurement. With this, they used another tool such as the Self-Produced Subjective Global Assessment (ASG-PPP) and in this assessment more than half of the patients presented some moderate or suspected degree of malnutrition, and received the "B" classification. The number of patients classified as severely malnourished by this tool was 6.38%. At the end of the study, 43% of patients were classified as eutrophic based on BMI. The study by KORMANN et.al (2021) corroborated previous results, in which of the patients evaluated with advanced metastatic cancer and undergoing chemotherapy treatment, more than half presented gastrointestinal symptoms such as nausea, diarrhea, flatulence and inappetence and were classified as overweight according to BMI, with an average of 28.8 kg/m². The nutritional intervention in this study made it possible to modulate symptoms during treatment, but did not recover nutritional status. According to GUIMARÃES and GALISA (2008), the authors emphasize that BMI is not the best parameter for evaluating nutritional status, as the index considers the total body weight in relation to the individual's height and in cancer patients there are variables to be considered such as: tumor increase and water retention, which can lead to erroneous nutritional classifications, not consistent with the patient's reality. Malnutrition and unintentional weight loss are the main causes of nutritional complications in cancer patients, having a greater impact when these patients are in an advanced stage of the pathology, influencing the response to treatment and shortening their lives (BRASPEN, 2017). The study discusses the most appropriate feeding route according to the patient's clinical status, with the oral route being considered the preferred route as it is more physiological and is commonly related to sensations of pleasure and well-being, and the food preferences of patients must be prioritized. patients, giving new meaning to the value of food in the social sphere (MAGALHÃES, et.al, 2018).

In the study carried out by SILVA et.al (2010), 78% of the patients studied used oral feeding. The patients underwent consultations with a multidisciplinary team made up of doctors and nutritionists and they carried out interventions that aimed to improve and/or remit the symptoms reported by the patients, such as: inappetence; dysgeusia; xerostomia; oral candidiasis/; gastric fullness; heartburn; nausea; vomiting; dysphagia; odynophagia; diarrhea and constipation. All symptoms showed significant improvements and the increase in appetite rose from 4% to 48%. Furthermore, the overall quality of life of these individuals was analyzed, using a scale between 1 (terrible life) and 7 (great life). In the first consultation, the average quality of life was 4.32 and in the second consultation there was an increase to 5.67, improving quality and providing more comfort and well-being to patients. However, in the study by OLIVEIRA and ROSSI (2023), there were lower incidences of anorexia in patients using exclusive enteral nutritional therapy, compared to oral and

mixed routes. The researchers were able to conclude that the side effects of medications and the progression of the underlying disease are determining factors for the increase in adverse gastrointestinal manifestations and these are directly associated with nutritional status. RALPH et.al (2021) also evaluated symptoms and quality of life in patients using the Eastern Cooperative Oncologic Group (ECOG) scale, which measures functional capacity and classifies according to the number of points, with a variable from zero to four, with zero being asymptomatic patients and four being bedridden patients and the Edmonton Symptom Scale (ESAS), which assesses the combination of physical and psychological symptoms, consisting of a list of nine symptoms frequently found in cancer patients. According to the results of the ESAS scale, the researchers were able to highlight the symptoms of pain, fatigue, nausea, depression, malaise and shortness of breath. Among the primary sites of the disease, the gastrointestinal tract represented 25.7%. They were able to conclude that the progression of the disease itself causes the patient to suffer due to several changes in their personal perception, as well as daily difficulties and functionality. Nutritional measures must be adopted with the aim of minimizing gastrointestinal symptoms, considering that episodes of nausea, vomiting and changes in perception occur more frequently, especially in patients undergoing chemotherapy. Interventions such as dividing the diet, reducing the volume offered and controlling the temperature of meals are recommended interventions to alleviate these symptoms, as well as the use of antiemetics, thus improving acceptance of the diet offered and consequently their general condition (REIS, 2012). The study by MANIGLIA et.al (2021) found changes in the taste perception of patients undergoing cancer treatment, with the sweet taste being felt with greater intensity compared to the salty. In the study by MENEZES et. al (2022) the patients interviewed reported complaints related to swallowing, such as: choking, coughing, pain when swallowing, presence of wounds in the mouth and throat, xerostomia, nausea, emesis, pain or difficulty opening the mouth, decreased mouth opening, difficulty chewing, decreased taste perception and sensitivity. In all individuals who participated, there was a prevalence (70%) of 'swallowing complaints. The study makes it possible to observe the benefits of multidisciplinary care in palliative care, aiming to reduce losses arising from the disease and antineoplastic treatment, in order to improve the patient's well-being and quality of life. Among the studies analyzed, the majority of patients were female and the most prevalent neoplasms were breast and lung cancer. The studies by KORMANN (2021) and MANIGLIA (2021) obtained similar data, as 90% of patients were female and there was a prevalence of overweight. In contrast, in the study by OLIVEIRA and ROSSI (2023), the majority of patients were female, but there was a prevalence of underweight.

CONCLUSION:

In Palliative Care, nutrition plays a fundamental role in addition to the supply of nutrients, as it fulfills a biopsychosocial role and must provide comfort and quality of life, giving new meaning to the value of food so that it becomes a source of pleasure and satisfaction for these patients, integrating it them to society (BRASPEN, 2017). New research on the topic must be carried out, with the aim of minimizing the effects of antineoplastic treatment, promoting a better quality of life and contributing to the preservation of nutritional status.

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