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Palliative physical therapy in metastatic lung adenocarcinoma: case report

Fisioterapia paliativa no adenocarcinoma metastático de pulmão: relato de caso

Fisioterapia paliativa en el adenocarcinoma metastático de pulmón: relato de caso

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This is an observational case study made through a physical therapy evaluation that aimed to evaluate the functional changes in lung canser in a patient under palliative care. One patient with metastatic adenocarcinoma under palliative care. Certain limitations were identified, such as: reduction of the amplitude of movement, diminution in complacency, pulmonary retraction and symptoms relative to lung cancer, such as pain, dyspnea, anxiety and sadness. The physical and psychosocial limitations were visible considering the results obtained, making it clear that the physical therapy evaluation was efficient to direct the treatment, bringing quality of life to the patient.
Descriptors: Palliative care; Lung neoplasms; Health evaluation.

Este é um estudo de caso observacional través de avaliação fisioterapêutica que teve por objetivo avaliar as alterações funcionais do câncer de pulmão no paciente em cuidados paliativos. Participou do estudo uma paciente com adenocarcinoma metastático em cuidados paliativos. Foram identificadas limitações como; redução de amplitude de movimento, diminuição da complacência, retração pulmonar e sintomas relativos ao câncer de pulmão como: dor, dispneia, ansiedade e tristeza. As limitações físicas e psicossociais foram visíveis a partir dos resultados obtidos, comprovando a eficácia da avaliação fisioterapêutica para direcionamento de tratamento, trazendo qualidade de vida à paciente.
Descritores: Cuidados paliativos; Neoplasia pulmonar; Avaliação em saúde.

Este es un estudio de caso observacional a través de evaluación fisioterapéutica que tuvo como objetivo evaluar las alteraciones funcionales del cáncer de pulmón en el paciente en cuidados paliativos. Participó del estudio una paciente con adenocarcinoma metastático en cuidados paliativos. Fueron identificadas limitaciones como: reducción de amplitud del movimiento, disminución de la complacencia, retracción pulmonar y síntomas relativos al cáncer de pulmón como: dolor, disnea, ansiedad y tristeza. Las limitaciones físicas y psicosociales fueron visibles a partir de los resultados obtenidos, comprobando la eficacia de la evaluación fisioterapéutica para direccionamiento de tratamiento, trayendo calidad de vida al paciente.
Descriptores: Cuidados paliativos; Neoplasia pulmonar; Evaluación en salud.

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INTRODUCTION

Yearly, about 11 million people are diagnosed with cancer. The number of new cases in 2030 is estimated to be higher than 26 million, 17 million of which would lead to death. This situation is due to the risk factors against which society does not take preventive measures, such as: smoking, eating habits and the lack of physical activity.

Since 1985, the most common type of cancer in the population is the lung neoplasia, caused, in most cases, by smoking. Lung cancer corresponds to 12% of all the types of cancer, and has the highest mortality rate, since its diagnostic happens in a late state of the disease. Consequently, the prognosis is not good. The most relevant symptoms are cough, dyspnea, hemoptysis and thoracic pain[1].

Cancer is described as the proliferation of cells in an unordered and abnormal fashion. These cells lose the mechanisms that are essential for their survival and duplication, leading to genetic changes that progressively make a normal cell become malignant[2].

In the past, men were the most common victims of lung cancer, since they smoked more frequently, but as years went by, women have been developing the disease more often than men. Lung cancer can be classified in two types: small cell carcinoma and large cell carcinoma. The most common is the large cell carcinoma. There are three histological types of lung cancer: the adenocarcinoma, responsible for 50% of cases, the squamous cell carcinoma, responsible for 25 to 30% of cases, and the large cell carcinoma, responsible for 15% of cases[3,4].

Patients with lung cancer have a high risk of metastasis, which affect especially the lymph nodes, bones, adrenal glands and brain. The survival is related to the progression of the cancer, that is, in stage III, patients have a 7 to 19% five-year survival chance, while this number falls to 2% in stage IV. In most diagnosed cases, a cure is not possible, and palliative care is indicated. It must be articulated and elaborated by the multi-disciplinary team. Knowing many different palliative alternatives can soften the symptoms, giving more comfort to the patient and their family[1].

Palliative care offer patients and their families quality of life, through the relief of paing and of symptoms of anguish. The multi-disciplinary approach is used to care for all the needs of the patients and family members, including biopsychosocial and spiritual ones.

A careful evaluation is believed to lead to improvements in proposed physical therapy treatments, helping the patient by improving their main signs and symptoms, such as dyspnea and pain, which are the most common[6].

The physical therapy evaluation is important to guide the intervention and the clinical evolution of the patient, from the moment of the prognosis until their death. The evaluation is followed by the verification of the hemogram, blood pressure (BP), cardiac and respiratory frequency (CF and RF), oxygen saturation (Sat02) and medical record analysis, all aimed to conduct the necessary procedures according to the condition and necessity of the patient[6].

This study aimed to evaluate the functional changes of a patient undergoing palliative care due to lung cancer.

METHOD

This is an observational case study conducted in October 2017 in the Barretos Cancer Hospital, through a physical therapy evaluation that included the collection of personal data, physical exams, respiratory system evaluation, ventilatory support, neurological evaluation, and physical therapy diagnostic, aiming at clarifying the functional changes caused by a metastatic adenocarcinoma and its treatment.

The evaluation tool used found results regarding the collection of personal data, physical exams, respiratory system evaluation, ventilatory support, neurological evaluation, and physical therapy diagnostic. Functional limitations were observed regarding the amplitude of the movement of the upper right limb (URL: flexion 116º, extension 40º, adduction 35º, abduction 127º. ULL: flexion 170º, extension 43º, adduction 35º, abduction 165º), in the lung compliance

and retraction, and in the muscular strength of the SRL (when compared to the opposite side). The Scale ESAS8 was used to evaluate signs and symptoms.

Data collection was conducted according to the norms of Ministry of Health and the National Council of Research Ethics, based on the resolution n. 196/96, version 2012, as approved by the Research Ethics Committee (CEP) of the institution, a process that was registered under protocol 1798/2017.

RESULTS

The case being discussed is that of a patient with metastatic lung cancer in palliative care. The patient, SLP, female, 48 years old, married, came to a consultation reporting to feel respiratory discomfort. A pleural effusion was found, and through an investigation of the origins of the bronchoscopy, was diagnosed with ESPINOCELULAR carcinoma (CEC).

She was directed to the Hospital where she was treated in 09/14/2012, and diagnosed with Primary Adenocarcinoma of the Left Lung, staged T4N3M1a.

In 06/06/2013, she underwent a nodule resection in the right thoracic wall. She was informed and advised about the impossibility of a cure and referred to palliative care in 08/02/2013.

Palliative chemotherapy and radiotherapy treatments were proposed, and metastasis were identified in the liver, pleura, lungs, central nervous system (CNS), attachments and pericardium.

The main complaints were: pain in the right hemithorax, dyspnea, limitation in the shoulder ADM NÃO SEI O QUE É ESSA SIGLA. She underwent complementary exams, including computer tomography, bone scan, magnetic resonance and laboratory exams required throughout the treatment.

The multidisciplinary team, according to the specific needs of the patient, conducted oncological work daily. The physical therapy followed a protocol that included active exercises, to increase movement amplitude, respiratory training and relief of the main symptoms, and also, electrotherapy as a pain relief measure. Regarding the symptoms, the ESAS scale, which evaluates the symptoms, is presented on Table 1.

The dyspnea of the patient was of the third degree according to the modified dyspnea scale of the Medical Research Council (MRC), corresponding to the item: "I walk slower than people of the same age on the level because of breathlessness or have to stop for breath when walking at my own pace on the level."

The patient reported discomfort which manifested as pain in the right hemithorax, especially in the region of the shoulder and the neck, in addition to other symptoms.

The evaluation was efficient for diagnosing the limitations of the patient due to the treatment and to the disease itself. These limitations can be treated by the physical therapist, as to offer the patient a better functional prognosis, helping them to have a better quality of life with the palliative care.

Table 1. Symptom evaluation (ESAS scale). Barretos, October 2017.

No pain	0 1 2 3 4 5 6 7 8 9 **10**	Worst possible pain
Not tired	0 1 2 3 4 5 6 7 **8** 9 10	Worst possible tiredness
Not nauseated	0 1 2 3 4 5 6 7 **8** 9 10	Worst possible nausea
Not depressed	0 1 2 3 4 5 6 7 8 9 **10**	Worst possible depression
Not anxious	0 1 2 3 4 5 6 7 8 9 **10**	Worst possible anxiety
Not drowsy	0 1 2 3 4 5 **6** 7 8 9 10	Worst possible drowziness
Best appetite	**0** 1 2 3 4 5 6 7 8 9 10	Worst possible appetite
Beste feeling of well being	0 1 2 3 4 5 6 7 **8** 9 10	Worst possible feeling of well being
No shortness of breath	0 1 2 3 4 5 6 7 **8** 9 10	Worst possible shortness of breath
Best sleep	0 1 2 3 4 5 **6** 7 8 9 10	Worst possible sleep

Source: Manfredini, 2014, p 114[8].

DISCUSSION

Palliative Care aims to evaluate, prevent or even treat uncomfortable symptoms. Its focus is not only the patients, but also family members, softening signs and symptoms, offering spiritual and psychosocial support, remembering the needs, values, culture and beliefes of both the patient and their family, offering quality of life or death[8].

The main symptoms of cancer patients under palliative care are: pain, nausea, anorexia, tiredness, dyspnea, confusion. The symptoms of lung cancer manifest in the early stage of the disease, compromising treatment[8,9].

Palliative care has an important role, not only considering signs and symptoms, but in offering well being and quality of life to cancer patients, be it in physical, psychosocial or spiritual aspects[10,11]. Physical therapy, in this moment, is essential to enable the patients to be functional and independent, so that they can perform daily life activities within their limitations[12].

Among the symptoms presented by patients under palliative care, dyspnea is the most common, leading to a great deal of suffering, discomfort, suffocation and fatigue. This clinical framework directly affects the capability of the patient to perform their daily life activities. They become increasingly dependent on their family members and health professionals, who end up suffering with the[13,14].

The physical therapy treatment must be included in palliative care and in the multi-disciplinary team, seeking to maximize the quality of life and promoting it, as well as preventing, intervening, and habilitating[10].

Positive results were found through the use of early mobilization, starting from progressive physical therapy activities[15,16]. The implementation of other physical therapy techniques also had interesting results, such as the techniques used to relieve pain, among which are massages, acupuncture, manual lymphatic drainage and kinesitherapy[17].

Patients under palliative care present many symptoms and limitations associated to the disease and to its aggressive treatment. Physical therapy evaluations guide the treatment according to the needs of the patient[6,17].

CONCLUSION

Palliative care are increasingly indicated as a

proposed treatment, not for research, but for the quality of life, involving many aspects. The physical therapy evaluation in palliative care was essential for the professionals to determine the best course of action, minimizing the impact caused by cancer.

The proposed conducted aimed especially at intervening in the pain and functionality, which are the main symptoms present, offering a better quality of life to the terminal patient.

Studies on the subject are still scarce, and need to be broadened. The physical therapy evaluation is important to direct better the treatment of patients under palliative care.

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CONTRIBUTIONS
All authors contributed equally in the many phases of research and in the writing of this article.

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