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Proposed physiotherapeutic procedure in the treatment of breast cancer

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Summary

Breast cancer is a global problem, causes many deaths worldwide, and the emergence of disability resulting from treatment.

Physiotherapy is a 24/7 process. It is very often limited to just a few minutes of exercise a day, which is not enough.

The aim of the work is to propose physiotherapeutic treatment in women after radical mastectomy and to present diagnostic problems caused by SARS-CoV-2 pandemics, which negatively affect cancer prevention.

Key words: disability, oncology, rehabilitation

Introduction

In the first minutes, with stabilized vital functions, after surgical removal of the breast cancer, it is important to implement physiotherapy through postural stimulation. Often this type of rehabilitation lasts for the life of the patient in the case of palliative patients. In chronically ill people, physiotherapy should last 24 hours a day through the use of, for example, positioning positions and transfers. This way of dealing with the patient positively influences the healing process by improving the quality of life. These activities are usually performed not only by the physiotherapists themselves, but also by the entire medical staff and family [1, 2, 3].

Physiotherapy should be an integral part of oncological treatment and palliative care. Its use has a positive effect on reducing the intensity of symptoms associated with the appearance of a decrease in the quality of life, which can include the appearance of:

- Dyspnoea
- Constipation
- Lymphoedema
- Myofascial pain
- Cancer-related fatigue (CRF) [4, 5]

Scheduled physiotherapy, well-chosen methods of rehabilitation by performing a thorough analysis of the functional state by using the ICF (International Classification of Functioning, Disability and Health) help the patient to achieve greater efficiency, independence and daily activity, which also improves his self-esteem [6].

When planning physiotherapy in a patient with advanced cancer, one should take into account

many limitations related to the underlying disease. Often times, the physiotherapy plan must be modified, which is related to the dynamics of the cancer treatment process.

In the era of the SARS-CoV-2 virus pandemic, oncological and palliative patients were exposed to treatment-related limitations. Restrictions on access to health care and the comprehensive treatment process have a negative impact on the treatment process. Patients also manifest the problem of fear of infection with the SARS-CoV-2 virus during an outpatient hospital visit, which also causes an ethical problem among medical staff, who is not able to guarantee the patient the certainty of not being infected with the virus during the treatment of the basic unit, and at the same time other possibilities. cancer treatment.

review of the literature

Physiotherapy, as a complex process aimed at restoring the highest possible efficiency, in highly developed countries is an indispensable element of treatment - a return to physical, mental and social well-being.

Restoring health to the disabled means a set of activities, in particular organizational, therapeutic, psychological, technical, training, educational and social activities aimed at achieving, with the active participation of these people, the highest possible level of their functioning, quality of life and social integration [4, 7] .

In the treatment of serious, especially permanent morphological damage or loss of body functions, compensatory and adaptive elements are included.

Compensation is a process that triggers the natural replacement possibilities that exist in every living organism. It is the ability to replace lost functions through a partially damaged organ, or the complete assumption of this function by another healthy organ.

Compensation may concern dynamic, static, functional and static-dynamic disturbances. The adaptation process is often associated with the phenomenon of compensation.

Adaptation is the ability of a person to adapt to social conditions, a morphological state that must be assumed to be fixed. Adaptation thus makes it possible to adapt to the diminished

efficiency of vital organs following disease or injury. Properly controlled or used adaptation allows to obtain the most optimal final treatment result. The most important in the adaptation process is gaining life independence, broadly understood, that is, both in everyday activities and in professional, social and family activities [1].

One of the methods of treating breast cancer that may lead to a permanent cure is surgery [8].

Breast amputation, on the other hand, involves the removal of the entire breast with the skin (except for the subcutaneous method).

There are amputations:

- simple (so-called toilet amputation) - removal of the primary bleeding or ulcerated tumor,
- subcutaneous - as a preparation for restorative surgery,
- modified - radical (Madden's method) - in the presence of stage I and II neoplasms that do not qualify for sparing treatment and the patient does not consent to sparing treatment [9, 10]

The situation of cancer patients in the SARS CoV-2 virus pandemic

The situation of cancer patients treated during the SARS-CoV-2 coronavirus pandemic requires priority treatment due to the speed of spread of cancer cells and lower immunity of cancer patients as a result of systemic treatment. From the perspective of cancer patients, the pandemic situation is a huge threat. Patients often have to choose between the fear of virus infection and the fear of spreading the neoplastic process [11, 12].

Time is of the essence in oncology, as 450 people are diagnosed with cancer every day in Poland, and 270 people die of cancer, which is why prevention is so important, as it has been limited in the time of the SARS-CoV-2 pandemic [13].

The report "Oncology in the times of COVID-19" prepared by the Oncology Foundation 2025 shows disturbing data related to the decline in the number of screening tests in the field of oncoprophylaxis. The targeted screening test in the diagnosis of breast cancer is mammography. The report shows that, compared to 2019, there was over 90% decrease in the number of tests performed [14].

Physiotherapy - proposed procedure

Physiotherapy should be implemented to improve patients before surgery in order to increase mobility before surgery, improve the function of the circulatory and respiratory systems and the efficiency of the nervous system.

The treatment period is a significant period for the continuation of physiotherapy.

There are three phases in this period [15]:

- Acute,
- Subacute,
- Chronic.

Physiotherapy in the pre-mastectomy period:

In the period before mastectomy, the main goal of rehabilitation is to improve muscle strength, to improve the range of joint mobility, to improve the cardiovascular and respiratory system and to instruct exercises performed in the first phase after the surgery [15].

In this phase, general development exercises should be implemented, focusing on the work of the upper limbs, on improving the range of mobility within the shoulder joints, on the flexibility of the chest muscles, and improving posture.

In addition, improving the broadly understood condition, supporting aerobic exercise, has a positive effect on the efficiency of the respiratory, circulatory and nervous systems.

During this period, it is also important to instruct exercises that will be performed immediately after the mastectomy, so that the patient does not have to learn new exercises after the surgery.

Physiotherapy in the post-mastectomy period:

The aim of physiotherapy in the first days after surgery is, first of all, to prevent the functional consequences of immobilization caused by the surgery and the anesthesia used.

The consequences related to functional changes include, among others [15]:

- Changes in the circulatory system,
- Changes in the respiratory system,

- Changes in the coagulation system,
- Changes in the bone and muscle system.

By implementing fractionated physiotherapy, the above-mentioned consequences can be reduced. During this period, breathing exercises are important, as they improve not only the respiratory system, but also the musculoskeletal system by improving the mechanics of the chest and mobilizing within the scar.

The training conducted before the appearance of the scar was significantly important in this period.

Another aspect of working with the patient is the implementation of anticoagulant exercises, including quick upright standing of the patient, in order to avoid complications from the circulatory system that cause immobility.

The patient is upright after his vital signs have stabilized, and in the perioperative period the process of rehabilitation should be monitored by controlling the pulse, blood pressure and saturation.

Physiotherapy in the subacute phase

This phase begins with the upright positioning of the patient until the moment of discharge from the hospital. During this period, it is important to implement the activities of daily living. Self-service exercises, breathing exercises, stretching exercises and scar mobilization exercises are used here. Work is also implemented in the maximum ranges of mobility, mainly of the shoulder joint on the operated side.

When working in this phase, the basic parameters of the circulatory and respiratory systems should also be monitored [14].

Physiotherapy in the chronic phase

This phase begins when the patient is discharged from the hospital and lasts as long as the preoperative recovery period requires. In some cases, this period lasts for the rest of the patient's life.

In this phase, exercises analogous to the phase before the procedure are used. The main goals during this period include:

- Restoration of muscle strength

- Restoration of tissue elasticity
- Restoration of ranges of joint mobility,
- Restoration of the efficiency of the respiratory and circulatory systems

In each of these phases, the process of physiotherapy is different, but in each of them it is necessary to adapt the process to the patient's abilities. In each job, the ICF should be used and diagnostic tests should be carried out to confirm the effectiveness of the improvement [6].

Conclusions

1. Physiotherapy should be part of the interdisciplinary treatment of breast cancer
2. Functional complications caused by mastectomy can be reduced by using an appropriately selected program of physiotherapy
3. The physiotherapy plan should be based on the ICF
4. Physiotherapy should begin in the pre-surgery phase

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