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Application of positioning and transfers in oncological physiotherapy

Zastosowanie pozycjonowania i transferów w fizjoterapii onkologicznej

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Streszczenie

Rehabilitacja jako proces powrotu do sprawności powinna odbywać się na każdym etapie choroby. Stymulacja mająca na celu przywrócenie utraconych funkcji ruchowych powinna trwać cała dobę, także podczas leżenia chorego w łóżku lub jego transferu – przemieszczania się z pozycji do pozycji. Pozycje

ułożeniowe są nieodzowną składowa przywracania spławność, a także elementem pielęgnacji chorego. Poprzez prawidłowe ułożenie chorego wpływamy na układ nerwowy pobudzająco. Dzięki poprawnemu ułożeniu zapobiegamy zmianą kostno - stawowym, obrzękom limfatycznym, a także wpływamy na pobudzenie kory mózgowej.

Praca ma na celu zaproponowanie pozycjonowania pacjenta i jego transferów jako bierny sposób rehabilitacji.

Słowa kluczowe: pozycje ułożeniowe, pozycjonowanie pacjenta, rehabilitacja, pielęgnacja, transfer pacjenta.

Summary

Rehabilitation as a process of return to fitness should take place at every stage of the disease. Stimulation to restore lost motor function should take place all day, including when lying in bed or transferring from one position to another. Placement items are an indispensable component of restoring floatation, as well as the element of nursing the patient. By correct arrangement of the patient we affect the stimulatory nervous system. Thanks to the correct arrangement we prevent bone-joint changes, lymphedema and also stimulate the cerebral cortex.

This articule aims to propose the positioning of the patient and his transfers as a passive way of rehabilitation.

Key words: positional positions, rehabilitation, chronic care, nursing, patient transfer.

Introduction

In the first minutes, with stabilized vital functions, after a vascular incident, craniocerebral trauma and other damage to the central nervous system, it is important to implement rehabilitation through postural stimulation. Often, this type of rehabilitation lasts for the rest of the patient's life in order to maintain the achieved level of fitness after the incident. In chronically ill people, rehabilitation should last 24 hours a day through the use of, for example, positioning and transfers. These activities are usually performed not only by the physiotherapists themselves, but also by the entire medical staff and the family [1, 2, 3].

Positioning the patient plays an important role not only in rehabilitation, but also in taking care of the patient, especially in patients who, for various reasons, cannot change their position on their own [4]. Thanks to the positioning position and transfers, we influence not only the convenience and comfort of life, but also stimulate the patient to act, stimulating his nervous system and thus activating him to act [2]. Research shows that even people in comas, when changing position, performed passively with a verbal instruction, activate the areas of the cerebral cortex, which is necessary for the recovery of mobility [5,3, 6]

Literature review

Rehabilitation, as a complex process aimed at restoring the highest possible efficiency, is an indispensable element of treatment in highly developed countries.

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] .

The term medical rehabilitation is understood as the treatment process which enables the acceleration of the natural regeneration process and the reduction of physical and mental consequences of the disease. Therapeutic rehabilitation must stimulate the entire therapeutic process, mainly through physical and mental activity [8]. In the case of permanent loss of some body functions, appropriate psychological treatment must lead to the recognition and acceptance of one's "new" body [1, 9].

Compensatory and adaptive elements are included in the treatment of, in particular, serious permanent morphological damage or loss of body functions.

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 a person's ability to adapt to social conditions, a morphological state that must be assumed to be fixed. Adaptation thus makes it possible to adapt to decreased 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, ie both in everyday activities, as well as in professional, social and family activities [1].

Pose positions, used as the initial rehabilitation process, are designed to stimulate the patient's nervous system. The main purpose of the positioning positions is to improve perception, regulate muscle tone, prevent pressure ulcers, and activate the patient. The positioning should give the patient a sense of security, especially in people with perception disorders, pay attention to the positioning on the side at the edge of the bed, so that they do not fear falling out of bed. The positioning should be used immediately after stabilization of vital functions and should be changed every 2 hours [1, 10].

Transfer is a change of position from lying down to sitting down from sitting to standing from sitting to bed to sit on a chair or a pram. It is an important element of patient care, needed, for example, when performing a toilet.

The patient is often accused of not helping us when transferring, and even the opposite, disturbing and resisting. However, you should ask yourself if we are doing it correctly for him? Maybe we introduce a defensive element for him because we do it in such a way that he does not feel safe [1].

The disease can be divided into 3 phases:ostrą,

- subacute,
- chronic.

n each of these phases, the rehabilitation process is different, but in each of them it is necessary to use postures and transfers as a supplement to therapy or as a basic therapy.

The acute phase is characterized by a life-threatening condition, the main goal is to stabilize systemic homeostasis, the goal of rehabilitation is to prevent pressure ulcers, thrombosis, inflammation (mainly of the respiratory system), edema, limited joint mobility, and to improve perception [1,2.10].

In this phase, the use of positional positions is crucial as it is often the only type of therapy that can be used. In the 1950s, it was believed that the human brain is unchanging, it only changes during development. However, in the 1980s it was proved that there is a possibility of reorganization of the structures of the central nervous system and the concept of brain plasticity emerged Merzenich and Taub proved in studies on monkeys that the brain has the ability to learn and activate new structures. [11]

Motor learning is a set of practice-related processes leading to a relatively permanent change in the ability to react [12, 13].

Changes in sensorimotor stimulation lead to a change in the activity of the cortical region responsible for sensorimotor control, which results in a change in descending stimuli.

Therapy by changing the position or position should take into account the elements of the patient's external and internal world, as well as the patient's ways of communicating with the environment.

Very often we do not tell the sick what we want to do. Hence, when trying to passively change positions, we encounter resistance from the patient, which is a defensive act [1].

The stimuli we use should, above all, be acceptable to the patient, safe for him and inspire trust. Each time the patient should be informed what we want to do and how, even if he is in a coma. We should apply the principles of a positive approach to the patient and family. The patient's position should regulate muscle tone and build a sense of security [2].

During positioning, we should follow the following rules:

- when changing the position, you must not pull the patient's hand only, the patient's arm should be supported all the time and move it in the proximal and distal part of the arm, directing it with the movement of the entire torso,
- do not turn the patient over the paralyzed shoulder, as this may cause subluxation of the shoulder
- the key is the correct positioning of the hips and shoulders, which should be extended forward, the lower limb in the direction of internal rotation, the arm in the direction of external rotation [1].

Characteristics of the patient's position in supine position [1, 4]:

- the head is directed towards the affected side and lifted slightly upwards with a pillow,
- the affected side of the body should be raised with a pillow or roller,
- the shoulder and pelvis are slightly supported to reach a neutral position,
- hand is pointing downwards,
- the knee should be in a slight bend without pillows,
- A soft roller should be placed under the foot to avoid plantar flexion

The position on the back can be appropriately modified depending on the range of movements and contractures of the patient.

Figure 1. Moving the upper torso

Characteristics of the patient's position in lying on his side [1, 4]:

- the patient should be placed on both sides, healthy and paralyzed,
- on the affected side, the patient should be positioned so that his arm is turned outwards with the elbow extended and the palm facing up,

Figure 2. Transition from lying on your back to lying on your side

- the healthy lower limb rests bent on the wedge, while the affected leg is straightened,

- while lying on the unoccupied side, both the upper and lower limbs of the affected side rest on the pillow, where the arm should be extended forward with the elbow extended,
- the head is directed towards the affected,
- the affected lower limb should be slightly bent at the hip and knee joints.

Figure 3. Moving the lower torso

Characteristics of the position of the patient lying on the side [1, 4]:

- flat bed,
- torso supported on the dorsal side,
- head and neck supported to avoid pressure on the m-o joint,
- scapula slightly protected - shoulder,
- shoulders bent and in turn,
- elbow in extension or flexion and supination,
- leg paralyzed maximally from the back and straightened, foot loose,
- less affected hip and knee 90 degrees flexion supported by a pillow.

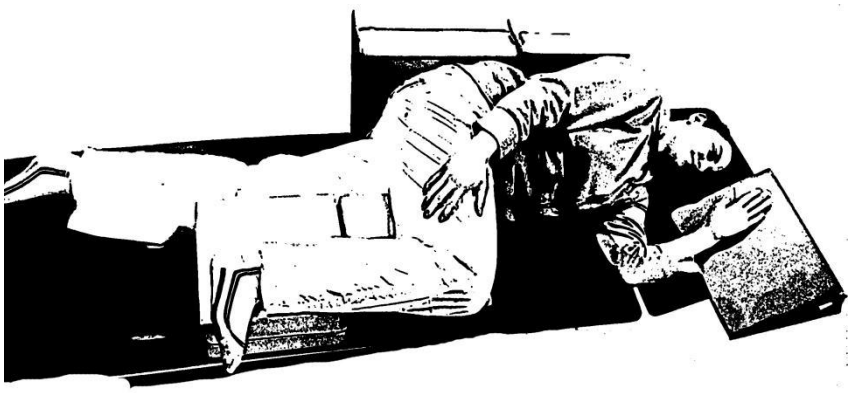

Figure 4. Laying on the side

Characteristics of the position of the patient in supine position [1, 4]:

- pillow for the head and pelvis,
- when it is needed, we put pillows under the arm,
- no pillows under the knees.

Characteristics of patient positioning on a wheelchair [1, 4]:

- upright position,
- hard cushions at the level of the Th-L transition
- arms on the table to the elbows,
- feet flat on the floor 90-degree knees
- the feet are put forward only when riding on the footrests,
- a patient who is unable to sit independently needs support from the abdominal and lateral sides and under the shoulder girdle.

Sitting down is a transition stage between lying down and walking [1, 4]:

- sit with your legs on the bed (achieved by placing pillows behind the patient's back to stabilize the straight torso, symmetrical weight distribution on both buttocks, and by pulling the upper limb forward with simultaneous external rotation in the shoulder joint)
- sit down with your legs lowered is a patient balance training. The patient's feet must be in full

contact with the ground, and the knee and hip joints must be bent at 90 degrees.

Figure 5. Transfer of the patient from bed to chair and vice versa

Positioning should be done in any position. By going through all these positions, we change the position of joints and individual parts of the body. It is important that the positioning is comfortable and acceptable to the patient. Only a stable and comfortable position will cause a sense of security in the patient and it will stimulate, not inhibit, the nervous system. The inhibitory effect on the nervous system causes pain. The patient's behavior during changes of position should be monitored, and the position should be changed if the patient reports discomfort, either through words or a painful grimace. The patient is not always able to lie in the position for 2 hours, therefore the positions can be changed more often. The time specified for 2 hours is the maximum time.

Initially, the patient is positioned passively, and the maintenance of a certain position is secured by the use of wedges, rollers and pillows [7]. The patient then aims to achieve an active pose without using any aids.

Conclusion

Patient positioning is an important process of patient rehabilitation and care. The positioning method should be comfortable for the patient and adapted to his abilities related to joint limitations. When changing position or transfer, communication with the patient is very important. So as to try to activate him to help, but also to reassure him and provide him with the comfort of safety. A stable position stimulates the cerebral cortex and reduces the increased muscle tone [1, 4]. The transfer of the patient from the bed to the trolley and vice versa should be done in a safe and ergonomic way for the patient and the operator, only in this way will we activate the patient when changing positions.

Appropriate posture positions have a positive effect on the patient's circulatory system and provide him with various stimuli, thus stimulating the nervous system, helping to regain sensory functions [1, 5].

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