

Problem-oriented Program of Physical Rehabilitation of Women with Postmastectomy Syndrome at the Hospital Stage of Rehabilitation

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Abstract:

The most frequent consequence of treatment of breast cancer is postmastectomy syndrome that combines abnormalities of physical, functional and psycho-emotional state. Postmastectomy syndrome is characterized by considerable variability in symptoms which occur in different time periods of treatment of breast cancer. *Objective:* to develop and ground the problem-oriented program of physical rehabilitation of women with postmastectomy syndrome at the stationary stage of rehabilitation. *Materials and methods of the study* – theoretical analysis and generalization of scientific and methodical literature and internet sources. The study involved 50 women with early signs of postmastectomy syndrome who underwent radical mastectomy by Madden for breast cancer at the hospital stage of rehabilitation. *Results:* The developed problem-oriented program of physical rehabilitation included using of static and dynamic breathing exercises, lymphatic massage and self-massage, correction of posture, stretching exercises, medical provisions, post-isometric relaxation, elements of ergotherapy, manipulative interventions (breathing through pursed lips, controlled coughing, autologous drainage, manual pressure, manual vibration) and auto-training. The goals and selection of physical rehabilitation depended on individual characteristics of women, the nature of postoperative period, taking into account concomitant diseases. Correction of the mental condition of women and related psychosomatic disorders at a hospital stage of rehabilitation is carried out by means of training of the basic elements of autogenous training, visualization, muscle relaxation, and self-regulation of breathing. *Conclusions:* The developed program can be used in conditions of therapy and rehabilitation establishments when dealing with women of this nosology.

Key words:

postmastectomy syndrome, rehabilitation, women, program.

Introduction. Postmastectomy syndrome (PMS) is characterized by considerable variability in symptoms, which occur in a different time period of treatment of breast cancer: early signs have post-traumatic nature and occur after surgery [2], later – due to the use of complex or combination therapy and characterized by plexites, contracture of shoulder joint, lymphostasis, pain, reduced muscle strength, cerebrovascular disorders [1].

Advanced researches prove purposefulness of early diagnosis and correction of complications from side of muscular skeletal apparatus, cardio-vascular and nervous systems for their removal in due time and improvement of women's life quality [3; 4; 5; 6]. However, prevailing orientation on medical component of rehabilitation, development of modern schemas of medical provisioning, implementation of reconstructive-plastic operations do not pay sufficient attention to physical rehabilitation of patients with postmastectomy syndrome.

The above said undoubtedly witnesses about importance of working out, conduct and determination of usefulness of timely rehabilitation measures among women with postmastectomy syndrome.

Communication of the work with scientific programs, plans, subjects. The research corresponds to the topic of research Lviv State University of Physical Culture «Fundamentals of physical rehabilitation of women with postmastectomy syndrome» (state registration 0115U007008).

Objective: to develop and validate the problem-oriented program of physical rehabilitation of women with postmastectomy syndrome at the stationary stage of rehabilitation.

Material and methods of the research: theoretical analysis of scientific-methodic literature data, the Internet, induction, comparison. The research was carried out on the base of Zaporizhzhya regional cancer center. In experiment participated 50 women with early symptoms of postmastectomy syndrome who underwent a radical mastectomy by Madden. The average age of women was 55,44±1,26 years.

Results of the research and their discussion. Stationary phase involved the individual classes and divided into preoperative (from receipt of the patient in the hospital), early and late postoperative stages, according to which were allocated tasks, means and methods of rehabilitation, taking into account contraindications and warnings, which mainly related to range of motion, strength and functional loads.

Preoperative period was focused on setting up women for future treatment, to learn the exercises of early postoperative period, to improve the functional state of the cardiovascular and respiratory systems, to create optimum psychophysiological status of women.

The objectives of early postoperative phase were: prevention of stagnation in the lungs; improvement of emotional state; prevention of early postmastectomy complications; self-learning techniques and movements; learning of self-massage lymph techniques.

The tasks of the late postoperative phase were: prevention of abnormal postures; preparation for everyday loads; increase muscle strength of upper limbs, back, abdomen; improvement of emotional state; improving endurance; motivation for self-employment.

Main means were general and special physical exercises; static and dynamic breathing exercises; breathing through preloaded lips, controlled coughing, autogenic drainage, manual pressing, manual vibration; post-isometric relaxation; elements of labor therapy; lymphatic drainage massage and self-massage; topical talks; consultations; auto training. For every patient of main group means, forms and methods of physical rehabilitation, which would reach the target in the most effective way, were selected individually. The trainings were conducted individually 2–3 times a day; 20–30 minutes every session. The patients' independent trainings included: fulfillment of therapeutic positions, self-massage, relaxation exercises and auto-training.

Manipulation intervention used to improve lung ventilation, prevention hypostatic phenomenon and reduction of breathlessness. For the treatment and prevention of early upper limb edema on the operation side was applied therapeutic massage by paravertebral zones Th₇₋₁, S₇₋₃, which leads to improve tonic reflex and vasomotor function of lymphatic vessels. This type of massage started on 2nd day after surgery in a sitting position. At the end of the massage women wore compression glove for 3–4 hours.

Contra-indications for therapeutic exercises and massages for women in the postoperative period were common grave condition, fever, presence of metastases, postoperative complications, acute pain, erysipelas.

In the first hours after awakening from anesthesia a patient's upper limb was raised on the elevator pillow to position the shoulder abduction 30–40 degrees from the chest and performed active movements of the wrist and metacarpophalangeal joints to prevent edema and stimulating the formation of collateral pathways of lymph. Performing these exercises necessarily alternated with light oscillating movement of the upper extremity for relaxation and relieving muscle tension. Each exercise was repeated 8–10 repetitions 4–6 times a day at a slow pace.

Postisometric relaxation was conducted to reduce muscle spasm, pain and increase range of motion in joints, particularly in the shoulder. Application sets of exercises with sticks were aimed to increase the range of motion in the shoulder joint, improving posture and simultaneously served as aggravating means to increase muscle strength.

We used exercises with burdening weight of own body, with isometric tension and general development to increase muscle strength. After the strength training was required to perform stretching the working muscles to relieve tension, as well as attracted to the muscle-antagonists, allowing symmetric load a single part of the body. Using stretching exercises muscles, guided by the principle of the impact on the muscles' «contraction-relaxation-stretching», the essence of which is that the muscles are subjected to pre-small static voltage for 3–4 seconds, then they relax and static stretch for 10–15 seconds and after cycle motions is repeated.

At this rehabilitation stage it is advisable to use active exercises and rocking exercises using healthy limb to increase the range of motion in the shoulder joint. Exercises with rocking in the shoulder joint are held in gradually increasing volume, to achieve recovery of the limb operations to horizontal level. Using medical provisions for the upper limbs promoted simultaneously reducing muscle tone shoulder girdle and prevention of edema on the operated side. We use a pillow elevating and lifting height, which is adjusted depending on the individual characteristics of the patient. This home position is taken after exercise, self-massage or a manual lymphatic drainage.

Conclusions. Problem-oriented program of physical rehabilitation was developed to successfully overcome early signs of postmastectomy syndrome, which included static and dynamic breathing exercises, lymphatic massage and self-massage, correction of the position, stretching exercises, medical provisions, post-isometric relaxation, elements of occupational therapy, manipulative interventions (breathing through pursed lips, controlled coughing, autologous drainage, manual pressure, manual vibration) and auto-training.

Prospects for further research include the development of personality-oriented programs of physical rehabilitation at clinical rehabilitation stage.

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