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Quality of life as an objective efficiency criterion of rehabilitation of women with postmastectomy syndrome

Abstract. The article deal with the problem of improving the quality of life in women with postmastectomy syndrome under the influence of physical rehabilitation. **Objective:** To determine the influence of the characteristics of physical rehabilitation for the quality of life of women with postmastectomy syndrome. **Methods:** Analysis and synthesis of the literature and empirical data; sociological methods (survey by FACT-B + 4); methods of mathematical statistics. The study involved 50 women with postmastectomy syndrome on the clinical stage of rehabilitation. The results of the influence of the developed problem-oriented physical rehabilitation showed an improvement in all components of the quality of life of women with postmastectomy syndrome during the clinical stage of rehabilitation and confirm its effectiveness.

Keywords: postmastectomy syndrome, women, quality of life, physical rehabilitation.

Introduction. The problem of improving the quality of life (QL) in women with postmastectomy syndrome (PMES) is particularly relevant, since the serious complications caused both by the tumor, and the methods of its treatment leads to significant violations of physical, emotional and social aspects of life [2, 7, 8].

Today QL as an important criterion for evaluating the effectiveness of the breast cancer treatment is given particular importance, since there is a need to keep physical activity, improving peace of mind and the ability of social functioning [3, 4, 5].

Review of current scientific publications of definite problem shows that quality of life is an important criterion for evaluating the efficacy of rehabilitation measures [3, 4, 5]. Scientific papers of some authors [7, 8, 9] shows that physical exercise plays a key role for improving the emotional state and quality of life of women appointed contingent.

The problem of studying the quality of life, physical, social and psychological adaptation of women with postmastectomy syndrome becomes more acute study when they appear likely to recover due to improved long-term results of treatment of oncological diseases [2, 8, 9].

However, the theoretical analysis of scientific papers suggests that the problem of physical rehabilitation of patients with the postmastectomy syndrome almost solved, in particular to the peculiarities of influence of problem-oriented program for the quality of life of women which are located on the stationary phase of rehabilitation.

Relationship with the academic programs, plans, themes. The selected research direction corresponds to the research topic of Zaporizhzhya National University "The development, experimental testing and implementation in practice the measures of physical rehabilitation to improve the health status of different categories of people" (state registration 0114U002653) and Lviv State University of Physical Culture "Physical rehabilitation of disabled people with disorders of the musculoskeletal system" (state registration 0111U006467).

Objective: to determine the influence of the characteristics of physical rehabilitation for the quality of life of women with postmastectomy syndrome.

Research Methods. 1. Analysis and synthesis of the library resources and empirical data. 2. Sociological methods (survey by FACT-B + 4). 3. Methods of mathematical statistics.

Organization of the research. The study was conducted on the basis of Zaporizhzhya Regional Oncology Center. The experiment involved 50 women with postmastectomy syndrome, the average age of the studied was 55.44 ± 1.16 years. These women underwent modified radical mastectomy for Madden and had 1st-2nd stages of tumor development. Randomized was formed a main group (MG) and a comparison group (CG) of 25 people each. Assessment of quality of life of patients going through standardized questionnaires for specific functional questionnaire evaluating breast cancer FACT-B + 4 (Functional Assessment of Cancer Therapy) [6]. Initial survey of patients occurred on the 2nd-3rd day after the surgery, secondary – on the 12-14th day of the stationary stage of rehabilitation. This questionnaire consists of general questions about cancer treatment and additional module that displays the symptoms associated with the comprehensive treatment of breast cancer [6].

Women of comparison group attending the program of Grushina T.I. [1], the main group – by the author's problem-oriented program, which provides the informed choice of funds, methods and forms of physical rehabilitation according to the postoperative period, age, physical characteristics, functional, emotional state, presence of comorbidities, type of attitude to the disease, surgical volume intervention. For each patient of the main group exercises were selected strictly individually the means, forms and methods of physical rehabilitation, which effectively help to solve problems and achieve goals.

The main tools were special exercises, static and dynamic breathing exercises, manipulation intervention (autogenic drainage, manual pressure, manual vibration), postisometric relaxation, elements of work therapy, lymphatic drainage massage and self-massage, thematic discussions, counseling, autotraining, differentiated psychocorrection. Classes are held individually 2-3 times a day for 20-25 minutes. By self-study patient was to perform medical provisions, self-massage, relaxation exercises and autotraining.

Results and discussion. At the beginning of the study, most studied aspects of quality of life were below normal almost two times, particularly in terms of the average values of the physical condition were lower than the norm on 16.20

points in the MG and 15.76 points - in CG; social/family – at 11.40 and 12.44 points; emotional – at 13.28 and 13.08 points; functional – at 16.36 and 16.52 points; scale of breast cancer – at 18 and 18.48 points; violation of the arms – at 12.40 and 11.96 points in the respective groups.

A detailed analysis of the responses of women showed the presence of side effects of therapy, which were quite severe in 40% of MG and 36% of CG. Analyzing the response to the statement: "I have observed a lack of energy" in the scale of physical condition was found that only 8% of respondents of MG and 12% of CG complained about the lack of light energy, 32 and 44% of women respective groups – in some ways it felt shortages.

Absence of pain was not observed in any of the patients in both groups, at the same time 16% of women MG and 20% of CG feel a little pain, slight pain – 52 and 36%, average pain – 32 and 44% in respective groups. The complete lack of sexual satisfaction reported 16% of both groups and only 8% of MG and 12% of CG all arranged. The results of the quality of life after rehabilitation (Table 1) indicate a probable positive changes on all scales. In particular improvement of the physical condition of the main group occurred at 6.08 points ($p < 0.001$), emotional – at 4.48 points ($p < 0.001$), functional – at 4.20 points ($p < 0.001$); improvement in relevant indicators of comparison group were at 3.72 points ($p < 0.001$), 0.80 points ($p > 0.05$) and 1.64 points ($p < 0.05$).

Table 1

Change of quality of life (M \pm m) in women of the main group (MG) and comparison group (CG) with postmastektomy syndrome on the clinical stage of rehabilitation

Indicators	MG (n=25)			CG (n=25)		
	before	after	p	before	after	p
Physical well-being	11,80 \pm 0,86	17,88 \pm 0,70	<0,001	12,24 \pm 1,04	15,96 \pm 0,93	<0,001
Social/family well-being	16,60 \pm 0,52	17,72 \pm 0,65 *	>0,05	15,56 \pm 0,97	14,76 \pm 1,03	<0,01
Emotional well-being	10,72 \pm 0,54	15,20 \pm 0,61 ***	<0,001	10,92 \pm 0,81	11,72 \pm 0,84	>0,05
Functional well-being	11,64 \pm 0,63	15,84 \pm 0,65 *	<0,001	11,48 \pm 0,80	13,12 \pm 0,84	<0,05
Additional concerns	18,00 \pm 0,63	20,92 \pm 0,80	<0,001	17,52 \pm 1,34	19,16 \pm 1,36	<0,01
Scale disruption of arm	7,60 \pm 0,67	10,72 \pm 0,52	<0,001	8,04 \pm 0,66	10,28 \pm 0,77	<0,001
Total	76,36 \pm 1,97	98,28 \pm 1,96 ***	<0,001	75,76 \pm 2,36	85,00 \pm 2,67	<0,001

Notes: * – $p < 0.05$, *** – $p < 0.001$ comparing the final parameters of the main group and the comparison group

For specific scale of breast cancer, there was improvement at 2.92 points ($p < 0.001$) in the main group and 1.64 points ($p < 0.001$) in comparison group; improve hand was at 3.12 and 2.24 points ($p < 0.001$) in the respective groups.

The final value of the physical condition in the main group accounted for 63,86 \pm 2,56% of the norm, social / family well-being – 63,29 \pm 2,40%, emotional – 63,33 \pm 2,62%, functional – 56,57 \pm 2 38%; in the comparison group value of the above indicators were 57,00 \pm 3,41%, 52,71 \pm 3,76%, 48,83 \pm 3,58%, 46,86 \pm 3,06%.

Comparison of finite quality of life showed significantly better values in MG for social / family well-being, emotional and functional at 2.96 ($p < 0.05$), 3.48 ($p < 0.001$) and 2.72 points ($p < 0,05$) compared to the CG. Total overall quality of life was greater in women MG at 13.28 points ($p < 0.001$) compared to the CG.

The analysis of responses by additional modules for the breast statement "The movement of the operated side causes me pain," replied a little – 12% of women MG and CG; to a certain extent – 64 and 60% respondents of respective groups, enough – 24% of women in both groups. Very severe pain on the operated side during the movement observed in 16% of women CG.

Analysis of responses in the statement "I feel the tightening of the operating side" showed, that only 8% of respondents of both groups not felt limit; a bit – 28% of women of MG and 44% of CG; to some extent – 40% and 32 of women respectively; enough – 20% of patients in both groups. Very strong rigidity felt 4% of women CG. Analysis of responses to questions about the numbness of the operated side showed that it felt a little 24% of women of MG and 40% of CG, enough – 24% of patients in both groups.

Conclusions. The results of the study found that women with the postmastektomy syndrome on the clinical stage of rehabilitation all the studied parameters of quality of life were two times lower than normal before the experiment. At the end of the stationary phase classes for problem-oriented physical rehabilitation has been shown to likely improvement in physical condition, emotional, functional, specific module breast cancer, confirming the efficiency of the program.

Prospects for further research include determining the effect of problem-oriented indicators of physical rehabilitation on anxiety and depression in women with postmastektomy syndrome.

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