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REHABILITATION AFTER SURGICAL TREATMENT OF BREAST CANCER

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ABSTRACT

Breast cancer is the most frequent cancer in females. For many years, breast cancer has been incredibly difficult for both patients and health care providers due to its high mortality and morbidity rates. The aim of our study was to access the application of rehabilitation program in secondary health system in our population. Material and method: interwove was made by 50 female, from Association for patients with Cancer in Bitola. The application of rehabilitation program was accessing with score of maximal activity. Results: 50% of patients have continual rehabilitation after surgical treatment; all of it is not paying from Health system. Discussion: A variety of robust studies have clearly showed the beneficial effects of exercise in a healthy population, with a varying spectrum of positive changes in physiological and psychological effects. The educational program involves in curriculum for physiotherapist is consisting of all steps for it. Conclusion: Future medical staff professionals can be successful increase quality of life by patient after mastectomy, but there are many health boarders to manage it in society.

Key Words: quality of life, mastectomy, education, rehabilitation.

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INTRODUCTION

Breast cancer is the most frequent cancer in females. For many years, breast cancer has been incredibly difficult for both patients and health care providers due to its high mortality and morbidity rates [1]. However, due to recent advances in the diagnosis and treatment of breast cancer, survival rates have increased. Overall, the 5-year survival rate for breast cancer in all stages has been reported as 89% by the American Cancer Society [2]. Despite this successful increase in the rate of survival, there are still many problems arising from either the disease itself or relating to its treatment in patients living with the disease.

Due to the high prevalence of breast cancer, especially in developed countries, the increased rates of survival and high expectations in the quality of life for women with breast cancer ultimately led patients and health care providers to seek alternative or additional approaches in the management of the disease [3]. All of these factors created a greater interest in the physical activity of cancer patients over time. Thus, there has been much research on the effect of exercise on breast cancer patients and survivors within the medical community in the last few decades [4].

The effect of exercise might be evaluated in some items according to the disease stage, which may all be considered different major topics of interest. Among them, the preventive effects of exercise for breast cancer and effectiveness of exercise in breast cancer patients are the most covered areas in the current literature. The preventive effect of exercise for breast cancer has been shown in epidemiological studies [5,6]. Risk reduction with physical activity for breast cancer in females is estimated to be up to 25%-30%. To achieve such an effect, women are recommended to follow a 150-min per week exercise regime of moderate to vigorous intensity consisting of sports or other physical activity.

Fortunately, in many cases, cancer patients are no longer considered isolated people in many aspects of life. The traditional approach of clinicians advising rest and the avoiding of physical activity to breast cancer patients and

survivors has changed over time, and both patients and the medical community are seeking the ideal level, type, and intensity of physical activity [7]. This brings us to the other aspect researched: the effect of exercise in breast cancer patients. The students physiotherapist in our Medical school are educating for treatment with rehabilitation programs after surgical treatment of breast cancer. It is in one of the basic lectures in fifth semester.

The aim of our study was to access the application of rehabilitation program in secondary health system in our population.

MATERIAL AND METHOD

The investigation was made, in population of 50 persons. They have interwoven in Association of patient with Cancer in Bitola. We have used questionnaire with 6 questions, to determine the level of applied rehabilitation program, and education after surgical treatment.

Data was consist of personal data (age, sex), and application or not physical therapy. The assessment was made with maximal score, from application of rehabilitation. The statistic was made with significance of $p<0.05$.

RESULTS

They were interweaving 50 patients, female, with first experience after surgical treatment. The frequentation of them by age is showing in table 1. And in table 2 the type of surgical treatment mastectomy with or without lymph node dissection.

Table 1. Frequentation of patients by age

Age	25-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70
N	1	2	6	8	12	5	7	8	1
%	2	4	12	16	24	10	14	16	2

The most of them were in age of 41-60 years (64%), and If they were employing, for them is important esthetic and function of the arm.

Table 2. Tape of surgical treatment

Intervention	M*	M+L*	Total
frequentation	12	38	50
%	24	76	100

*Mastectomy-M

*Mastectomy with or without with lymph node dissection-M+L

We can see that 76% of patients have lymph node dissection, and by them to have lymph edema is expecting.

The answers from questioner are showing in table 3. The maximal score is 300points, from positive application of rehabilitation program.

Table 3. Application of some rehabilitation activities and quality of life

Question	Yes	%	T	Significance
Do you use medical compressive arm sleeve	16	32	2.5	$p<0.05$
Education for home exercises	26	52	0.18	$p>0.5$
Education for arm elevation and positioning	12	24	3.6	$p<0.05$
Mobilization of arm and breathing exercises	22	44	0.85	$p>0.5$
Education for use of breast prosthesis	42	84	4.8	$p<0.05$
Education for nutrition and healthy life by Association	41	82	4.5	$p<0.05$
Total score	159	53	1.03	$p>0.5$

DISCUSSION

Cancer is a leading cause of death worldwide and accounted for 8.2 million deaths (22% of all NCD deaths) in 2012.Breast cancer is currently the top cancer in women worldwide, both in the developed and the developing world. The majority of breast cancer deaths occur in low- and middle-income countries, where most of the women are diagnosed in late stages due mainly to lack of awareness and barriers to access to health services. There are about 1.38 million new cases and 458 000 deaths from breast cancer each year (IARC Globocan, 2008). Breast cancer is by far the most common cancer in women worldwide, both in the developed and developing countries. In low- and middle-income countries the incidence has been rising up steadily in the last years due to increase in life expectancy, increase urbanization and adoption of western lifestyles. Mortality rate in Macedonia was for 2000 year, on 100 000 population 134.1, and for 2012, was 146.4 on 100 000 [9].

In our population by 76% have done lymph node dissection, but only 24%, have elastic arm compression, and it is significant for not use od the others, p>0.05. In our health system prescription of elastic arm compression for patient after lymph node dissection is not regulated, so they must pay themselves.

A variety of robust studies have clearly showed the beneficial effects of exercise in a healthy population, with a varying spectrum of positive changes in physiological and psychological effects[10]. Hence, it is important to determine how these positive effects of exercise impact breast cancer patients.

In our curriculum for education of physiotherapist, there is a lecture for Rehabilitation after surgical treatment of breast cancer, in subject Rehabilitation in oncology. They are educating by special protocol to treated patients in acute, sub acute and chronic stage, after mastectomy.

They are training to make evaluation of lymph edema and motion in arm, application of elastic compressive arm orthose, and management plan for exercises and activities at home.

The effect of treatment of cancer on immune functions and the positive effects of good immune function on survival and morbidity in cancer patients have been linked [11]. Scientific data has suggested cancer and its treatment are related with a disruption of immune functions [11,12]. Pro-inflammatory cytokines are found in higher levels in advanced stage, metastatic, and recurrent disease compared with non-metastatic, non-recurrent, and early stage disease [15]. Although researchers have investigated the relation between inflammatory markers and exercise in cancer patients, there is no significant data showing the effects of exercise on immune system markers in cancer patients [12,14]. Recently, a few studies have showed some positive results in cytokine and insulin levels with Tai Chi exercises in breast cancer patients [15,16]. The positive results of Tai Chi exercises were explaining for students physiotherapist, in subject Basis of alternative medicine [17]. Nutrition by patients for cancer is also involve [18].

One descriptive study showed that the prevalence of fibromyalgia might be high in hospitalized breast cancer patients[19]. Fibromyalgia symptoms additional to typical cancer symptoms, such as fatigue, might inversely influence the patients' quality of life. Thus, taking fibromyalgia into account when prescribing exercise to patients diagnosed with breast cancer should be considered. The pain management for patient with cancer is possible to trade with TENS, and equipment for lymph evacuation. Our students have education for pain management by patient with cancer in special subject Pain management in physical therapy. They are introducing and educate with all possibilities of treatment of cancer pain with medicaments and with possibilities of physical therapy modalities [20]. Indications for exercise treatment in this patient regaining or improving physical functions, aerobic capacity, strength, flexibility, body image, body composition, quality of life, the ability to physically and psychologically withstand to any current and/or future cancer treatments, and to withstand anxiety due to living with current or recurrent disease[20]. Indications also include the reduction of long-term and late effects of cancer treatment, and the potential delay in any recurrence or progress of the disease[21].In our research application of exercises are not significant p>0.05.

Contraindications for exercise prescription in breast cancer patients include, but are not limited to: acute post-operative period (up to 8 wk); acute arm and shoulder problems for upper body exercises; patients with extreme fatigue, anemia, or ataxia; and general cardiovascular and respiratory contraindications for an exercise regimen[22]. The team treatment by many specialists is need to determinate condition by patient with cancer. Application of breast prosthesis is significant, because its prescription is regulate by health system.

Traditionally, upper extremity exercises were avoided in breast cancer patients with lymph node dissection and radiotherapy. However, some recent studies have shown that upper body exercises do not have a negative impact on lymphedema[22]. In our health system are not management plane for increase a quality of life of those patients, so the all activities are done by Association of patients with cancer. From those reasons beside we have education for medical staff in are of rehabilitation by patient with cancer, the management of it in society is no significant p>0.05.

CONCLUSION

Exercise is not merely safe and feasible for breast cancer patients, but is moreover a complementary treatment for one to achieve physiological and psychological improvements. There is increasing evidence that regular exercise after the diagnosis of breast cancer might have a substantial positive impact in mortality, morbidity, prognosis, and quality of life. We advise a multidisciplinary approach in order to encourage breast cancer survivors into engaging in rehabilitation programs combining both strengthening and aerobic exercises for the most beneficial results. The students physiotherapist from in High Medical School of Bitola, has complete educational program for rehabilitation of patients after surgical treatment of breast cancer.

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CONFLICT OF INTEREST:
The authors declare that they have no conflict of interest.

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