QUALITY OF LIFE WITH MASTECTOMY FOR BREAST CANCER, IN TERMS OF PATIENTS’ RESPONSES OF SF-36 QUESTIONNAIRE

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QUALITY OF LIFE WITH MASTECTOMY FOR BREAST CANCER, IN TERMS OF PATIENTS’ RESPONSES OF SF-36 QUESTIONNAIRE (Abstract): The aim of the study was to describe the quality of life in female patients with mastectomy performed for breast cancer.

Material and methods: The study was carried out in Iași, between October 2014 - January 2015, on a sample of 23 patients with mastectomy, using the SF-36 Questionnaire (Short Form 36) in a single visit, with direct questioning of patients; a secondary instrument was a general anamnestic questionnaire referring on age group, area of residence, type of surgery, associated diseases, family history, psycho-emotional traumas. Results: The overall profile of the studied case was: woman of 40-49 years (47.8%), from urban area (82.6%), with a family history of neoplastic pathology (43.5%), with psycho-emotional traumas (73.9%) and a self-estimated general health as “moderate” (26.1%), with “a lot of energy” only “some of the time” (43.5%), “feeling worn out” (43.5%), and ”cutting down the amount of time spent on work or other activities” (69.6%), with “moderate” (34.8%) or even “intense” (21.7%) “bodily pain”, “some of the time” feeling “very nervous” (43.5%) and “so down in the dumps that nothing could cheer her up” (39.1%). The strongest correlation was found between the variable “cut down the amount of time spent on work and other activities” as a result of “physical health” (Role-physical items) and “limited in kind of work or other activities” (r=0.8981). Conclusions: Application of SF-36 Questionnaire in female patients with mastectomy for breast cancer highlighted that strenuous and moderate activities were limited than about half of the surveyed cases, somatic pain affecting their work and normal activities and physical and emotional health influenced the social activity of patients for more than half of the lot. It is necessary to extend the study in order to bring relevant data on the quality of life of these patients, in the social, economic and cultural center of Romania. Keywords: QUALITY OF LIFE, SF-36 QUESTIONNAIRE, MASTECTOMY, BREAST CANCER.

According to the World Happiness Report for 2012, Romania was ranked 90 in the world, with a score of 5.033, between Kyrgyzstan and Zambia (first was Denmark). Comparing the term of happiness, therefore, the quality of life, Romania has lost 0.186 points during 2005-2007 (1). The first survey on quality of life in the population of European countries was performed in 2006 (2). At that moment, Romania, as a candidate country for EU, was below the continent average, with a score of 6.2. According to the third survey conducted in 2012, Romania has very low scores on several indica-
tors of quality of life, compared to other countries, and, on the perception of quality of life in terms of health services, ranked the next to last position (3).

The notions of subjective well-being and happiness have a long tradition as core elements of the concept of quality of life. However, until recently, these ideas were not too often considered beyond the purpose of statistics. In recent years, this view has changed, especially after the publication of the report of the Commission on the Measurement of Economic Performance and Social Progress, which recommended that national statistical agencies collect and make public aspects of these concepts. According to the researchers from the United Nations (4), the quality of life is an intersection of notions of professional status, health level, balance between work and life, education and skills, social connections, civic engagement of the individual, environment quality and personal safety.

There are numerous questionnaires to assess the quality of life, validated on various healthy population groups and also on groups with different pathologies. SF-36 (Short-Form 36-Item Health Survey) uses eight scales with questions regarding physical functioning (first 10 items), diseases caused by physical problems or role-physical (the next 4 items), bodily pain (2 items), general health (5 items), vitality (4 items), social functioning (2 items), emotional problems caused by social dysfunctions or role-emotional (3 items), and mental health (5 items) (4).

In 2012, in Romania was recorded breast cancer incidence of 50.04 cases per 100,000 inhabitants, an average value (which ranks 33 among European countries) compared to the top three worldwide, those in Belgium (111.98%ooo), Denmark (105.0%ooo), and France (104.46%ooo) (5). Approximately 12.3% of women will be diagnosed with breast cancer at some point in their lives, in the coming years, as stated in a prognosis made by the National Cancer Institute, USA, based on data collected between 2009 and 2011 (6). In recent decades, the five-year survival of female patients with breast cancer increased from 75.2% in 1975 to 86.5% in 1994 and 90.6% in 2006 (6). Therefore, it is necessary to take into account the quality of life of those women who received successful anti-cancer therapies, having, as the main target, the increase of survival.

The aim of our study was to describe the physical and emotional impact on quality of life lived by women with mastectomy performed for clinical and paraclinical diagnosis of breast cancer, using the SF-36 questionnaire.

**MATERIAL AND METHODS**

The study was conducted between October 2014 - January 2015 on a sample of 23 female patients treated surgically at Regional Institute of Oncology Iași (19 patients) and “St. Spiridon” Emergency Hospital Iași (4 patients). Inclusion criteria for the study were: clinical and paraclinical diagnosis of breast cancer; total or partial mastectomy. Exclusion criteria: patients who refused the participation in the study.

Informed consent of research participants received the Ethical Approval from the Research Ethics Committee of the University of Medicine and Pharmacy, of Regional Institute of Oncology, and “St. Spiridon” Hospital. Every patient participating in the study became aware of its contents and signed two copies of it, one of which remained in the project file and the other to the participant.
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The study was conducted in a single visit with direct questioning of patients as the method. The main tool used was SF-36 questionnaire validated for healthy population of Romania in a project conducted by the “Romanian Association for Public Health and Health Management” and “Centre for Urban and Regional Sociology”, Bucharest (7).

The second instrument used was a general anamnesis questionnaire with items regarding age group, area of residence, type of surgery, associated diseases, family history, and psycho-emotional traumas 3-5 years before breast cancer diagnosis.

Statistical processing was performed using MS Excel 2010 and EPI/INFO 7 software.

RESULTS

Statistical descriptive data for the study group. Distribution by age group showed a preponderance of cases at 40-49 years (47.8%), followed by group 50-59 (21.7%), 30-39 and 60-69 (13.05%), then 70-79 (4.4% of cases), with a mean of 50.59 (standard deviation = 11.07). Age histogram tended to be within normal limits, describing Gaussian distribution. Patients were mostly from urban areas (82.6%), mentioning cities in the North-East region of Romania. All patients were hospitalized for clinical and paraclinical diagnosis of breast cancer; the surgical treatment was total mastectomy in 86.9% of the patients and partial mastectomy / lumpectomy (sector, quadrant) in 13.1%; axillary lymph node dissection was performed in 100% of cases.

Patients mentioned tumors and depression as associated diseases in 3 cases (13.05%) respectively, but 2 patients indicated the presence of autoimmune diseases in personal history. Other conditions were cardiovascular diseases (ischemic heart disease, arterial hypertension) and diabetes mellitus. Family history of neoplastic pathologies was positive in 10 cases (43.5%); 7 patients (30.4% of the total group) mentioned malignant and benign tumors of the breast, ovary, prostate and colorectal cancer in first and second degree relatives. Regarding the psycho-emotional traumas of the past 3-5 years, 17 patients (73.9%) noticed their presence (divorce - in 2 cases, 8.7%; deaths in family - in 6 cases, 26.1%; other emotional traumas considered important by patients - 11 cases, 47.8%).

Results of SF-36 questionnaire. The questionnaire is divided into two concepts: physical health and mental health. We described statistically each scale of the SF-36 questionnaire and the following results were obtained:

I. General health scale included 5 items estimating the own health; patients considered that it was “good” in 52.2% of cases and 26.1% assessed it as “tolerable”. One patient (4.3%) mentioned an “excellent” condition and another one, a “bad” state of health. 30.4% of total indicated that it was “definitely true” and “mostly true” they “get sick easier than other people”, and 43.5% were denied “absolutely” and mostly “this fact. 39.1% indicated that it is “definitely” and “mostly true” that were healthy like anybody know, and 34.7% denied this fact. 21.7% of patients expected (“definitely” + “mostly”) that “their condition to get worse”, 52.2% denied this fact, and 26.1% did not know how to respond. If “definitely and mostly true” that “health is excellent” said 52.2% of patients and that is false, 21.7%.

II. Vitality scale: “full of life” felt “much of the time” 30.4% of patients and
43.5% “had a lot of energy” only “some of the time”. No patient chose the answer “none of the time” at this item. Most patients felt “some of the time” “worn out” (34.7%) and “tired” (47.8%), but “all of the time” and “most of the time” only 8.7% and 17.4%, respectively.

III. Physical functioning scale. “Vigorous” activities “limited a lot” 43.5% of patients, but “not limited at all” one of them (4.3%); those “moderate” “limited a lot” 26.1% of total cases and “not limited at all” 8 patients (34.8%). "Lifting or carrying groceries” “limited a lot” 47.8% of all cases and “not limited at all” 21.7% of them. About “climbing several flights of stairs”, 39.1% of patients said they were “not limited at all”, but 30.4% indicated that they were “limited a lot” or "limited a little", respectively; “climbing one flight of stairs” was “not limited at all” for 60.9% of patients. “Walking more than a mile” “limited a lot” and “a little” 56.5% of all cases, but “not at all” 43.5%; “walking several hundred yards” “limited a lot” only 26.1% of patients, and “walking one hundred yards” “limited not at all” in 86.9%. Activities such as “bathing or dressing oneself” “limited a lot and a little” only 43.5% of cases. It is noted that physical functional limitation increased with the increasing of degree of activities difficulty.

IV. Role-physical scale. It was found that 69.6% of women “counted down the amount of time spent on work or other activities”, 65.2% “accomplished less than they would like” and 73.9% of patients were limited “in kind of work and other activities” and “had difficulties performing work or other activities”, respectively.

V. Bodily pain scale contains items about changes in normal work. Patients experienced bodily pain “moderate” in 34.8% cases and “severe” and “very severe” in 21.7%, which “interfered with normal work” “moderate” in 30.4% of patients and “severe” and “very severe” in 21.7%.

VI. Social functioning scale showed how physical health or emotional problems interfered with social activities currently carried out with family and friends. Patients indicated that these activities changed “moderately” in 30.4% of cases and “extremely” in only 8.9%. During the last four weeks, there were times when physical or emotional health influenced social activity of patients, “most of the time” for 17.4% of them and “some of the time” for 34.8%. However, no patient chose the answer “all of the time” at this item.

VII. Role-emotional scale highlighted difficulties occurred when performing work or other regular daily activities as a result of any emotional problem such as “feeling depressed or anxious”; those have been reported in more than half of the cases, respectively 52.2% reduced “the amount of time spent on work or other activities” and “accomplished less activities”; 56.5% of patients stated difficulties of achieving them “with the same care as usual”.

VIII. Mental health scale. Patients mentioned that “some of the time” felt “very nervous” (43.5%) and “felt so down in the dumps that nothing could cheer them up” (39.1%), but “most of the time” “calm and peaceful” (43.5%). "Downhearted and depressed" were "all of the time” 2 patients (8.7%), others only “some of the time” or “a little of the time” (30.4%). The next item about if she was deemed a “happy person”, 17.4% of the cases mentioned that “some of the time” 4.3% “ a little of the time” or “none of the time”; however, more
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than half of sample chose answers such as “all of the time” (26.1%), “most of the
time” (17.4%), and “a good bit of the time” (30.4%).

**Correlations analysis.** The patients’ age was positively correlated with the difficulty of carrying out “moderate activities” \( (r=0.2184) \), with the “cut down the amount of time spent on work” and the occurrence of difficulties in “performing the work and other activities” \( (r=0.3530) \). Also, the variable “age” was positively correlated with variables “been very nervous” \( (r=0.4298) \) and “felt so down in the dumps that nothing could cheer them up” \( (r=0.3938) \).

The strongest correlations were found between the variable “cut down the amount of time spent on work or other activities” as a result of physical health and “been limited in kind of work or other activities” \( (r=0.8981) \), followed by correlation between “intensity of bodily pain” and “extend pain interfered with normal work” \( (r=0.8711) \). The next correlation was between the variable “cut down the amount of time spent on work and other activities as a result of emotional problems” and “accomplished less than they would like due to emotional problems” and also “frequency health problems interfered with social activities” (item no. 10) \( (r=0.8360 \text{ in both cases}) \).

It is necessary to notice that there was no correlation \( (r=0) \) between the variable “healthy as anybody they know” and “cut down the amount of time spent on work or other activities as a result of physical health”, “cut down the amount of time spent on work or other activities as a result of emotional problems”, “accomplished less than they would like to due to emotional problems” and “extend pain interfered with normal work” (item no. 8).

Concerning the question of the existence of psycho-emotional traumas, this variable, from the second questionnaire, was positively correlated with items “been very nervous” \( (r=0.5985) \), “intensity of bodily pain” \( (r=0.5456) \), and “feel down-hearted and depressed” \( (r=0.3887) \).

**DISCUSSION**

There are numerous valid instruments used to measure quality of life in breast cancer patients. EORTIQ-C30 questionnaire (European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core Cancer) and that specific for breast cancer (EORTC QLQ-BR23), FACIT-G (Functional Assessment Chronic Illness Therapy-General Questionnaire) and the variant for cancer breast (FACIT-B) were considered the most useful tools and best developed to measure the quality of life in those patients. The various surgical procedures have led to similar results on quality of life assessments, although patients with mastectomy compared with those who underwent conservative treatment have been reported frequently a body image issues and sexual dysfunction.

Regarding systemic therapies, almost all studies have indicated that patients receiving chemotherapy for breast cancer suffered from certain side effects and symptoms that adversely affected their quality of life, as well as adjuvant hormone therapy, although they were associated usually with an increase in survival rates. In patients with metastases, data on quality of life represented prognostic and predictive factors of survival. Psychological distress, anxiety, and depression were common in studies on groups of breast cancer patients, even after years from the date of diagnosis and treatment. Psychological factors were
used, also, as predictors of subsequent quality of life or overall survival of patients with breast cancer.

Sexual functioning of patients with breast cancer, especially those younger, is being reduced, having a negative impact on their quality of life. Antiemetic supportive treatment, for example, or interventions such as counseling, social support, and exercise can improve the quality of life of these patients. Pain, fatigue, arm disability and postmenopausal symptoms are common in patients with breast cancer. Therefore, it is recommended their recognition and management as important aim until they do not start to disrupt their health-related quality of life (8).

Health-related quality of life is now considered an important aim in oncology trials. Studies conducted over the years have shown that the assessment of the quality of life in patients with cancer could improve the treatment and even was considered a prognostic factor indicating the future directions useful for the implementation of effective therapies (9, 10).

Among studies on quality of life, breast cancer received the most attention, for certain reasons, primarily because of the increasing incidence of the disease (over half a million women worldwide are diagnosed with breast cancer yearly – 1.67 million in 2012, 25% of all cancers - and over half a million die from this disease - 522,000 in 2012) (11); secondly, because techniques for early detection and treatment of breast cancer are currently at high standards, increasing significantly the survival time, compared to previous decades; therefore, to study the quality of life in this context should become a priority (9).

Another reason is that the location of the breast neoplastic process affects women at all levels of their identity, thus, to study the quality of life of these patients who have lost breast or breasts should become vital. In addition, women play important roles as life partner, wives, mothers, in every family. When a woman develops breast cancer, all family members are about to develop various types of pathological conditions. Thus, psycho-emotionally speaking, breast cancer becomes a disease of the whole family.

So, a multitude of other reasons could be added. Therefore, the question formulated by many researchers becomes evident: to what extent the quality of life studies have improved therapeutic outcomes and, ultimately, improve the quality of life of women with breast cancer? (10).

CONCLUSIONS

The results of the SF-36 questionnaire used to assess quality of life in female patients with mastectomy for breast cancer highlighted that strenuous and moderate activities limited almost half of the surveyed cases, bodily pain affecting their work and normal activities. Also, physical or emotional health influenced social activity of patients, most of the time and some of the time for more than half of them. The existence of psycho-emotional traumas in patients’ history was positively correlated with current physical health or emotional issues.

Analysis of a larger group of patients, including those assisted in hospitals from other university centers, will bring more relevant data concerning the mastectomy performed for breast cancer and quality of life lived in the social, economic and cultural space of Romania.

ACKNOWLEDGEMENTS

This paper received financial support
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through the “Program of Excellence in doctoral and postdoctoral research in multidisciplinary chronic diseases”, contract no. POSDRU / 159 / 1.5 / S / 133377, beneficiary “Grigore T. Popa” University, co-funded by European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013.

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