

EFFECT OF BREAST CONSERVING SURGERY IN QUALITY OF LIFE IN BREAST CANCER PATIENTS

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ABSTRACT

Purpose: Breast cancer is the most common cancer among women and the second leading cause of the cancer deaths. To assess the effect of adjuvant treatment modalities on the quality of life scales between the two groups of patients who underwent breast conserving surgery (BCS) or modified radical mastectomy (MRM).

Patients and Methods: 74 breast cancer patients whose follow-up exceeds minimum 12 months from diagnosis without any recurrence and distant metastasis and who accepted to take the questionnaire was admitted to the study group. These patients were given a questionnaire consisting of 53 questions about functional status, well-being sense and symptoms. That was a Turkish-translated version of European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 Quality of life scale version 3-Turkish and EORTC QLQ-BR23 for assessment of quality of life.

Results: Quality of life after BCS was found better than MRM for well-being sense, physical status, role performance, emotional status, cognitive status, social status, fatigue, nausea-vomiting, pain respiratory distress, sleep disorders, anorexia, constipation, diarrhea, financial problems, body image, sexual functions, sexual satisfaction, future anxiety, arm symptoms and breast symptoms.

Conclusion: Our results suggest that breast conserving surgery will positively affect not only the patient but also the people who were living with her.

Keywords: breast cancer, quality of life, sexual health, breast conserving surgery, depression

MEME KANSERİ HASTALARINDA MEME KORUYUCU CERRAHİNİN YAŐAM KALİTESİ ZERİNE ETKİSİ

ZET

Amaç: Meme kanseri kadınlarda en ck grlen kanser trdr. Bu calıŐmanın amacı; meme kanseri nedeniyle meme cerrahisi sonrası adjuvan radyoterapi ve/veya kemoterapi ve/veya hormonoterapi uygulanmıŐ kadınlarda; modifiye radikal mastektomi(MRM) ile meme koruyucu cerrahinin (MKC), yaŐam kalitesinin karŐılaŐtırılmasıdır.

Hastalar ve Yntem: Tanıdan itibaren en az 12 aylık takibi olan, yerel-blgesel ve uzak yinelemesiz, soru formunu yanıtlamayı kabul eden 74 hasta calıŐmaya dahil edilmiŐtir. Hastalara operasyon sonrası yaŐam kalitesi ile ilgili toplam 53 soruluk bir anket verilmiŐtir. YaŐam kalitesini deđerlendirmek iin kullanılan anket formları European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 Quality of life scale version 3-Turkish ve EORTC QLQ-BR23'n Trkeye cvrilmiŐ formlarıydı.

Bulgular: Yapılan yaŐam kalitesi leđinde MKC ve MRM yapılan hastalarda yaŐam kalitesi alanlarından aldıkları puanların dađılımı incelendiđinde genel iyilik, fiziksel semptom, rol performans, emosyonel durum, biliŐsel durum, sosyal durum, semptom kontrol, fonksiyonel lek aısından vcut grnm, seksel fonksiyon,cinsel tatmin, gelecek endiŐesi, kol semptomları, meme ile ilgili Őikayetlerinde meme koruyucu cerrahinin modifiye radikal mastektomiye oranla daha iyi yaŐam kalitesi sađladıđı grlmektedir.

Sonuc: Uygun olan hasta grubuna, meme koruyucu tedavi yaklaŐımı nerilerek hastaların yaŐam kaliteleri daha ck korunabilmektedir. Meme kanserine ynelik gncel tedavi yaklaŐımlarında hedef, sadece hastalısız ve genel sađkalımı uzatmak deđil, tedavilerdeki baŐarıyla birlikte kadına iyi yaŐam kalitesi sađlamak olmalıdır.

Anahtar szckler: meme kanseri, yaŐam kalitesi, cinsel sađlık, meme koruyucu cerrahi, depresyon

Introduction

Breast cancer is the most common cancer among women and the second leading cause of the cancer deaths. Mortality rates of breast cancer are slightly decreasing due to early diagnosis and improvements in treatment. Since standard radical mastectomy

was established first by Halsted for breast cancer surgery, the extent of surgical intervention gradually decreased with the results of numerous randomized controlled trials (1). Because of the increasing life time expectancy and less extensive surgical procedures, quality of life concept gained importance and popularity.

Table 1. Distribution of surgical procedures to age groups

Age	MRM	BCS
50<	1(%6,6)	27(%45.76)
>=50	14(%93.33)	32 (54.23)

Quality of life analysis evaluates the results of treatment from a different point of view. This evaluation consists of social, physical, functional and psychological status of health interpreted by the patient (2). Health related quality of life measurement first used in United States of America to assess the degree of well-being sense of the patients. Then it has been believed that it is important to evaluate the results of the quality of life assessment with the survival and cure rates. Quality of life scales must assess patients not only with their physical status, but also with their psycho-social well-being sense. Ries et al. emphasized that at least 25 to 35% of patients experience psychological disorders differing gradually from anxiety to major depression and sexual function disorders which continue minimum two years despite treatment (3).

The aim of this study is to assess the effect of adjuvant treatment modalities (radiotherapy and/or chemotherapy and/or hormonal therapy) on the quality of life scales between the two groups of patients who underwent breast conserving surgery (BCS) and modified radical mastectomy (MRM).

Patients and methods

We evaluated 248 patients who treated for breast cancer in our hospital between 2003 to 2006. All of the patients received adjuvant radiotherapy at the Department of Radiation Oncology of the same hospital. Seventy-four patients whose follow-up exceeded minimum 12 months from diagnosis without any local recurrence and distant metastasis and who accepted to take questionnaire was admitted to the study group. All of these 74 patients were given a questionnaire consists of 53 questions about functional status, well-being sense and symptoms under the supervision of the doctor in charge in a private environment. The questionnaire that was used for the assessment of the quality of life was a Turkish-translated version of European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 Quality of life scale-3 and EORTC QLQ-BR23. The QLQ-C30 included the first 30 questions, and QLQ-BR23 included the remaining 23, from 31 to 53. Questions were divided to subgroups for evaluation purposes. This scale evaluates the physical functions, the role performance, the emotional status, the cognitive status, the social status, the general well-being sense, the symptom control, the body image, the sexual functions, the anxiety about future and the side effects of treatment. The quality of life comparisons between MRM and BCS groups were made by using this scale. Statistical evaluation was made by chi-square analysis. All of the statistical calculations were made by SPSS 13.0 for Windows pro-

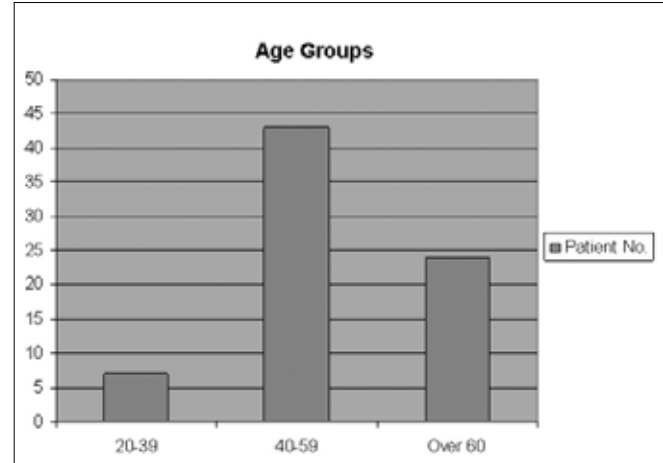


Figure 1. Age distribution of the patients

gram with 95% confidence rate. P values smaller than 0.05 was accepted as significant.

Results

The median age of 74 patients was 50 ranging from 31 to 65. There were 7 patients (9.4%) between 20-39, and 43 patients (58, 1%) between 40-59, and 24 patients (32, 4%) over 60 years of age. Fifteen patients underwent MRM, and 59 patients underwent BCS (lumpectomy+axillary dissection). All patients received adjuvant radiotherapy to the breast and/or chest wall. Radiotherapy to the axillary region was performed only in patients with axillary metastasis. Sixty-seven of 74 patients received adjuvant chemotherapy (CEF/CAF), and 47 patients had adjuvant hormonal therapy (tamoxifen, 20 mg/day).

The distribution of surgical procedures according to the age groups is shown in Table 1. Patients with BCS were more likely to be younger than 50 years of age than patients with MRM (27/59 (45.7 %) vs 1/15(6.6 %), respectively; $p=0.021$). This finding suggest that surgeons prefer BCS over mastectomy in younger age groups. In the Quality of life scale evaluated in Figure 2, we compared the distribution of the scores of BCS and MRM groups. Quality of life after BCS was found better than MRM for the following factors: the well-being sense, the physical status, the role performance, the emotional status, the cognitive status, the social status, the fatigue, the nausea-vomiting, the pain respiratory distress, the sleep disorders, the anorexia, the constipation, the diarrhea, the financial problems, the body image, the sexual functions, the sexual satisfaction, the future anxiety, the arm symptoms, and the breast symptoms. In the general quality of life evaluation according to the subgroups; the well being sense, the functional status and the symptom control were found to be significantly better in the BCS group than MRM patients (Figure 3). However, the differences between two groups was not statistically significant in regards to the functional scale and the breast-arm symptom control.

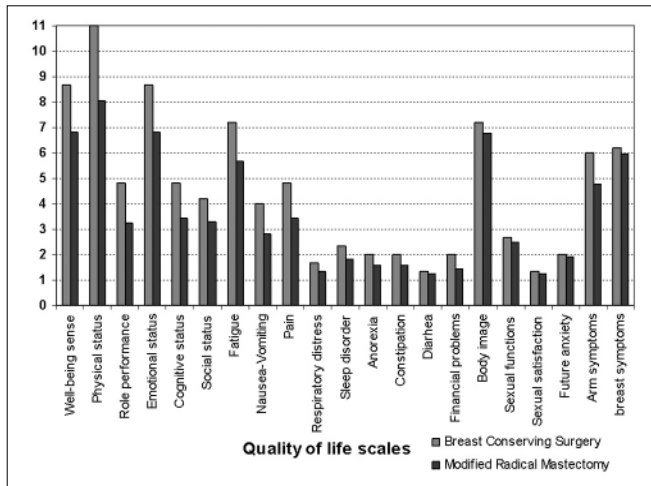


Figure 2. Assessment of Quality of Life according to the surgical intervention

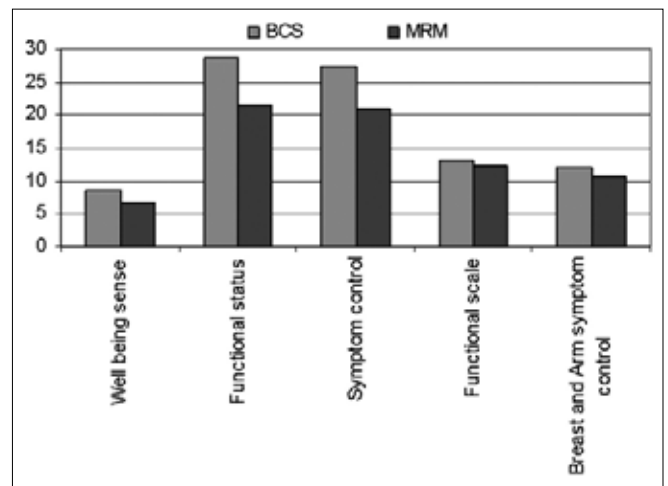


Figure 3. General Quality of Life Evaluation

The well-being sense was questioned with the 29th and 30th questions of the questionnaire. The response of 53.3% of patients with MRM was “medium” while 94% of patients with BCS responded “good” or “very good”. This difference between the two groups was statistically significant ($p=0.03$). Questions about; physical function, emotional status, role performance, social status and cognitive status was evaluated under the heading “functional status”. The physical function was assessed by the evaluation of the first 5 questions of the questionnaire. The rate of patients who need assistance in daily life was found to be 2.04% in the BCS group, and 50% in the MRM group. This difference between two groups was statistically significant ($p=0.01$). The tautness, and the anxiety, and the anger, and the depression were questioned for the emotional status in the 21st to 24th questions of the questionnaire. Patients with BCS were less likely to have emotional instability compared to patients with MRM (BCS, 1.7%, vs MRM, 49.9%; ($p=0.04$). Performing daily activities, hobbies and work were questioned at the 6th and 7th questions of the questionnaire as role performance. The role performance was more likely to be diminished in patients with MRM patients than patients with BCS (MRM, 30%, vs BCS, 1.7%; $p=0.01$).

The effect of the physical status or the medical treatment on family life and social activities were evaluated under the social status with the 26th and 27th questions of the questionnaire. Patients with MRM were more likely to accept disease as a handicap for family life and social activities than patients with BCS (MRM, 43.3%, and vs BCS, 1.7%; $p=0.01$).

The difficulties originating from forgetfulness and concentration abnormalities were questioned with the 20th and 25th questions of the questionnaire to determine cognitive status. Patients with MRM were more likely to have cognitive difficulties in MRM than patients with BCS (MRM, 43.3% vs BCS, 3.4%, $p=0.02$). Questions about fatigue, nausea-vomiting, pain, respiratory distress, sleep disorders, anorexia, constipation, diarrhea and financial problems were evaluated under the heading “symptom con-

trol”. The symptom rates of MRM and BCS groups were; 100% and 64% for fatigue, 86% and 22% for nausea-vomiting, 100% and 44.9% for pain, 60% and 23% for respiratory distress, 33% and 27% for sleeping disorders, 73.3% and 40.7% for anorexia, 80% and 49.2% for constipation, 66.7% and 13.6% for diarrhea, 66.7% and 28.8% for financial problems due to symptoms, respectively. Although the rate of the questioned symptoms showed that MRM caused a poorer quality of life than BCS, only the difference of pain ratings between two patient groups was statistically significant. Questions about; body image, sexual functions, sexual satisfaction and future anxiety was evaluated under the heading “functional scale”

The majority of patients with MRM (93.3%) and 40.7% of BCS patients were not happy about their body image. Only 13% of MRM and 25.4% of BCS patients stated that there was no change in their sexual functions. These results show that surgical intervention, either MRM or BCS, impairs sexual functions. The rate of the absence of sexual satisfaction was 86.7 and 76.3 for MRM and BCS patients, respectively. All of the MRM patients have some degree of future anxiety while 44.1% of BCS patients expressed that they don't have any fear for their future life. None of the differences in functional scale group was found to be statistically significant. However, the rates show a better quality of life in the BCS group. The arm symptoms were expressed as disabling in 84.4% of patients with MRM and 40.1 of patients with BCT. Furthermore, rates of disabling breast symptoms were 86.6% and 29.6% for MRM and BCS patients, respectively. Even though the differences between these rates weren't statistically significant, BCS seems to result in a better quality of life than MRM.

Discussion

A lot of stress factors such as mutilations of the body image, additional problems due to adjuvant therapies, anxiety about the primary disease, and fear of death interfere with the quality of life in breast cancer patients. Hughes reported that 80% of patients have fear and anxiety due to disease (4). Recurrence possibility remains

an anxiety cause in follow up period (5). Some authors stated that this intense psychological stress continues for at least two years in up to 20-30% of patients (5,6). Arora et al stated that the quality of life is especially low in functional scales during the first year after surgery but tend to improve with time, in their series of 103 patients (7). Cancer has bad effects on life whatever its origin and type. Improvements in medical technologies and treatment opportunities result in early diagnosis and long survival. But these facts bring a larger patient population who must learn to live with cancer with a better quality of life. Living with cancer requires to get rid of symptoms and some other consequences about daily life caused by cancer, and to organize daily life by admitting a new standard of life. In this process indefiniteness and fears about future will of course cause an anxiety or depression. Studies show that patients with anxiety lives symptoms of well being, physical status, role performance and emotions intensely, while patients with depression experience physical symptoms harder. Berglund stated that 20 to 25% of patients experienced physical problems, 30% sexual problems and nearly all patients had a body image problem after adjuvant treatments (8). Ganz et al. found no difference between the MRM and BCS groups in regards to psychological adjustment or quality of life one year after surgery (6). Omne-Poten et al found anxiety and depression rates 45% and 49% in 62 MRM patients, and 40% and 43% in 37 BCS patients, respectively (9). Kiebert et al. stated that 9 of 16 studies showed no difference in quality of life between surgical therapy groups (10). Some other authors found that women who subjected to breast conserving surgery effected more than others (11–14).

Nearly half of our MRM patients had depressive findings and they couldn't tolerate physical symptoms as easy as others just mentioned in the literature. Tolerance was better in the patients who admit the need for psychological assistance. Because as stated by many authors, hope is a major factor to improve quality of life (15). The role performance and the well-being sense were significantly better in our BCS patients as in the literature (6,16). From the social status point of view, the effects of physical status and/or adjuvant therapies on family life and social activities were questioned. Long and debilitating cancer treatment may affect family, work and social life of patient, resulting in the loss of role and status with hopelessness, desperation, social isolation and exhaustion, finally depression (13,17–19). We observed these findings in 43, 3% of MRM patients while only 1,7% of BCS patients experienced difficulties in social status. This finding correlates well with literature and shows BCS helps a better quality of life for social status. We also observed the positive effect of BCS in the questionnaire about cognitive status. The rate of cognitive disorders were 86.6% in MRM versus 3,4% in BCS groups, respectively that resulted in a high difference between these two groups.. However, it may partly be due to the higher percentage of older patients in MRM group.

The body image, sexual functions, sexual satisfaction were evaluated for functional scale. Psychosexual problems after treatment for breast cancer may be due to a lot of factors such as previous sexual problems, body image, other psychological disturbances, age and menopausal status (20). Ganz et al. found no difference of

psychosexual symptoms between MRM and BCS groups in their two studies. Furthermore, they claimed that some problems about outfit and body image were detected lower in BCS group (16,21). The probable causes of the lower rates of psychosexual disturbances among Turkish women are the lower expectations in sexual life and shyness while replying questionnaire due to cultural and social background. On the other hand, 55% of present psychosexual disturbances were experienced after surgery, and 24% after chemotherapy and 1% after radiotherapy. These results suggest that surgery as the invasive treatment modality deeply affects the psychosexual life of Turkish women. Whelan et al. claimed that differences between patients who were treated with and without radiotherapy disappears after 2 years of follow-up (19). Arora et al. found significant deterioration in sexual satisfaction and the well-being sense of patients who were treated with chemotherapy (7). Ganz et al. stated that the rate of psychosexual disturbances significantly high only in patients who had amenorrhea due to chemotherapy (21). The hormonal therapy is generally more tolerable than surgery, chemotherapy and radiotherapy. However, the most widespread used agent tamoxifen has some side effects such as hot flushes, vaginal dryness and loss of libido and causing some degree of psychosexual disturbance due to side effects. An analysis of the extent of surgical intervention on quality of life, only two of 12 studies reported that there was no effect of surgery on body image (22). In the remaining ten studies about quality of life in the aspect of body image were significantly better among BCS patients (10). Mutilation of body image in MRM patients is evident. This surely deteriorates the self esteem about the body image of the patients. We found a worse body image and a worse functional-physical status in the MRM group in concordance with the literature (10, 22–24). Usage of the self made or commercial external breast prostheses is an attempt to complete the body image and shows inferiority due to mastectomy. The difference of quality of life about breast and arm symptoms between the MRM and BCS groups wasn't statistically significant in our study. However, we observed higher rates for arm swelling, pain and limitation of arm movements in the MRM group.

Conclusion

Because of the achievements in therapeutic modalities life expectancy of breast cancer patients is lengthening year by year. This makes the concept of quality of life more important. A number of questionnaires can be use to assess quality of life. In this study we used EORTC-QLQ-C30 (version 3.0) and EORTC-QLQ-BR23 which we think accommodates best to the social and cultural status of Turkish women. Our study gives some clues for treatment opportunities despite the limited number of attendees. Although some degree of psychosocial deterioration and depression is inevitable in breast cancer patients, it is possible to minimize these by reducing the rate of mutilating therapies and preserving body image. Therefore, breast conserving surgery should be considered for appropriate patients. This will positively affect not only the patient but also the people who are living with her. Cooperation of psychologists with the multidisciplinary treatment groups strongly advisable.

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