

Treatment at a day-care hospice of patients after mastectomy for breast cancer improves their physical and mental health

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Objective. The aim of this research was to establish whether three-month treatment by a multidisciplinary team at a day-care hospice improves the physical and mental health (PMH) of patients after mastectomy for breast tumours and after the completion of oncological therapy. **Patients and methods.** By a prospective study undertaken on the palliative care ward of the University Clinical Centre in Tuzla, Bosnia and Herzegovina from May 2006 to May 2007, 35 patients were surveyed who had undergone mastectomy for breast tumours and had completed specific oncological therapy. The treatment by the team at the day-care hospice lasted three months. For an assessment of PMH a SF-36 scale was used. In the statistics we used the even T-test and the Wilcox test. The difference was seen to be significant at $p < 0.05$. **Results.** The overall physical health of the patients examined after treatment at the day-care hospice was taken to be 0.55 (0.31 – 0.86) points and was statistically significantly better than the test before treatment at 0.42 (0.27- 0.83; $p < 0.0001$). Improvement was achieved in the sub-scales of general health and physical function. Treatment in the day-care hospice of the patients examined also led to improvement of their overall mental health, especially on the sub-scale of social functioning and mental health. **Conclusion.** The research established the improvement of all aspects of mental health and most aspects of physical health in the patients after three months' treatment by a multidisciplinary team at the day-care hospice.

Key words: Physical and mental health, Breast cancer, Hospice

Assessment of the state of the physical and mental health of patients suffering from malignant tumours should identify and describe the harmful effects of the disease and the therapy used, and create the possibility of choosing the most appropriate further

therapy procedure. The old paradigm of treating oncological diseases based on the exclusive use of drugs, which most often do not treat the cause of the disease, and also introduce a large amount of interactions and side effects, requires thorough change. The

results of research into the inter-connection between spirituality, hope and social support for people with oncological diseases show their positive effect on physical and mental health (1). It is expected that about 32% of the population will suffer from some form of malignant tumour during their life, and almost 50% of patients require medical, social and financial support from the health care system, family and society (2).

Breast cancer is rare before 25 years of age. The highest incidence is between the ages of 45 and 55. The risk of breast tumours grows significantly with age so that almost $\frac{1}{2}$ breast tumours occur in women after they are 65 and $\frac{1}{4}$ after 75 years of age (3). This is the most common form of malignant tumour in women, which develops quietly without any subjective difficulties. It is often seen by the patients and their environment as a hard, undeserved punishment, which after a great deal of suffering and trouble, leads to a fatal outcome. In patients with breast tumours other problems arise such as sexual function disturbance, difficulties accepting the loss of a body part and hair, but also problems related to the family such as "conflict" between the desire to protect the member who is sick and the desire for the children or the fragile patient to be spared stress. Precisely for these reasons there is a connection between emotional and psychosocial problems in both patients and members of their families, who also need support (4). The enormous growth of the number of sufferers from breast cancer demands a specific approach to this category of patients, an understanding of their problems, with the continuous education of the patients, but also their families and relatives. Most often the difficulties suffered by these patients may be divided into two groups: physical (weakness, pain, sleepiness, nausea, loss of appetite) and psychological (depression, anxiety, sadness, loss of concentration). These reactions may occur individually, several of them

together or some may not occur at all. The intensity of reaction varies, but the psychological response of the patient is most expressed when the first signs of the illness are discovered, when they are informed of the diagnosis or immediately after that, on the first or repeated therapy, the end of the therapy and during the social reintegration of the patient. In patients with breast tumours the greatest need for group psycho-social and spiritual support occurs immediately after the diagnosis, or during active treatment. These groups should be homogenous (only patients with breast tumours and not other tumours) making it possible to pass on experience intensively between patients and for medical staff to offer information about further treatment and the prognosis of the disease (5). The first day-care hospice, opened in 1999 at St. Christopher's Hospice in London, set as its primary goal the improvement of the quality of life of patients, that is, giving a new dimension to the program of care already established for patients and their families. The aim of that project was to help people to get out of their "four walls", to rest from their illness, to socialize and feel supported, all as part of a wide variety of activities (6).

The day-care hospice has a regular and structured program of activities, and patients can visit it on the days that best suit them. They usually take 10-15 patients a day, enabling them to be away from home longer than would otherwise be possible. They find new meaning and purpose in life there. Gentle exercises in the physiotherapy department to relaxing music are part of the regular program, which all promotes their mobility, improves their mood and reduces anxiety and stress (7). Occupational therapy is intended to stimulate the patients, enrich their lives and give them back a feeling of their own worth (8), and the friendships made help to restore self-respect and self-confidence, which also creates better rela-

tionships with family members. It is necessary to gain the patients' full confidence, and open room for communication in once completely isolated and withdrawn patients. This is best illustrated by the patients in their own words, "Some patients get stuck on the surface level of their experience and they need help to move from a superficial reaction to something deeper during treatment" (9).

The aim of the research was to establish whether three-month treatment by a multidisciplinary team at a day-care hospice improves the physical and mental health of patients after mastectomy for breast tumours and after completion of specific oncological therapy.

Patients and methods

The prospective study was conducted on the palliative care ward of the University Clinical Centre in Tuzla from May 2006 to May 2007. 35 patients were surveyed of an average age of 59.85 ± 10.37 years who had undergone mastectomy for breast tumours, and who had subsequently completed specific oncological therapy (chemotherapy, radio therapy). Treatment at the day-care hospice with palliative care lasted at least 12 weeks. The basic criteria which needed to be met for joining the research were that the subjects had had a confirmed patho-histological diagnosis of breast tumour, that after that they had undergone the surgical procedure of mastectomy, and that according to the findings by the oncologist they had completed specific oncological treatment. All the patients were previously acquainted with the goals, nature and methods of the research, and they gave their signed consent to participating in the research.

Physical and psycho-social support for patients at a day-care hospice assumes a structured program and the involvement of a multidisciplinary team. On each visit a doctor monitors the patient's condition, assesses the need for additional diagnostic or

therapeutic procedures and, together with the nurse, plans the activities of the other members of the team. Individual, group or combined treatment by a psychotherapist is aimed at removing the psychological barriers caused by the illness and reducing the level of anxiety and depression. The activities of the occupational therapist are aimed at encouraging creativity through making simple objects, the patient performing simple tasks or activities in the art room. Physical therapy treatment consists of group or individual, passive or active kinetic therapy exercises to improve mobility and physical activity in the patients and to treat lymphostasis which is a frequent complication of breast tumours. Advice and specific activities by the social worker help the patients to realize their material and other social welfare rights prescribed by law. Treatment also includes transport, lunch and the all-day stay of the patients in specially adapted facilities.

To assess physical and mental health, we used the SF-36 scale (10, 11) which has three levels consisting of 36 questions (level 1), grouped in 8 scales (level 2), and the third level, with four subscales each, consists of two collective assessments on the basis of which an assessment is made of overall physical and mental health. Physical function is assessed on the basis of 10 questions relating to performance of everyday physical activities, whilst four questions relate to physical, and the following three to mental problems which limit the patients' activities. Physical pain and general health are assessed by two questions each, and mental health with five questions, which give an assessment of feelings of tension, despair, peace, disappointment, or happiness. Socializing with friends and family is assessed using two questions within the social function scale, whilst four questions related to feelings of being full of energy for life or a feeling of being worn out are part of the scale of vitality. A number expressing a value up to 0.25 points shows

a poor result, from 0.26 to 0.50 a moderate result, from 0.51 to 0.75 points is good, and over 0.76 points is an excellent result for each scale.

Statistical analysis was performed using the biomedical software known as MedCalc for Windows, version 9.4.2.0. For testing the repeated measurements of dependent samples, depending on the distribution of the variables, we used the even T-test and the Wilcox test. Statistical hypotheses were tested at the level of significance of $\alpha = 0.05$, that is, the difference between the samples was considered significant if $P < 0.05$.

Results

In the surveyed patients on their first testing, their overall physical health was assessed as

moderate (0.42 points), whilst when tested after three months their overall physical health was assessed as good at 0.55 points, which is statistically significantly better in relation to the first test. The greatest progress was seen in the subscale of physical functioning and general health (Table 1).

After three months' treatment at the day-care hospice there was a significant rise in the number of patients, from 6 to 17, who assessed their overall physical health as good, whilst at the same time there was a fall in the number of patients, from 25 to 15, with the assessment moderate (Figure 1).

The results of the second test, after the patients had been treated for 3 months at the day-care hospice, were better in the subscales of physical functioning, general health and thereby overall physical health.

Table 1 Physical health of surveyed patients before and after treatment

Scales	Examined patients (n = 35)		
	Starter testing	Testing after three months	P
Physical functioning*	0.49 ± 0.18	0.58 ± 0.17	0.0002
Role-Physical**	0.25 (0.25 - 0.25)	0.25 (0.25 - 0.50)	0.004
Bodily Pain**	0.74 (0.74 - 0.84)	0.84 (0.74 - 0.90)	0.01
General Health**	0.20 (0.15 - 0.30)	0.42 (0.37 - 0.54)	< 0.0001
Physical Component Summary**	0.42 (0.36 - 0.50) [†]	0.55 (0.48 - 0.60) [†]	< 0.0001

Presented as *mean ± SD and **Median (Interquartile range)

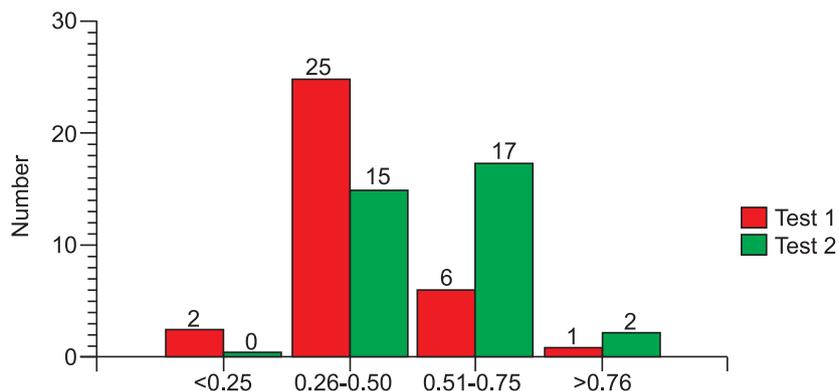


Figure 1 Overall physical health of surveyed patients before and after treatment. Test 1 – the number of patients before treatment; Test 2 – the number of patients after treatment.

On the first visit to the day-care hospice, the overall mental health of the surveyed patients was assessed as moderate at 0.26 points. When tested after three months, the overall mental health was assessed as good at 0.65 points, which was statistically significantly better than on the first test. Obvious progress was made on all sub-scales of overall mental health (Table 2).

The number of patients was significantly reduced who assessed their mental health as poor on the first test (from 18 to 2), or moderate (from 15 to 1), and the number of patients increased whose assessment was good (from 2 to 27) or excellent (from 0 to 5) (Figure 2).

The results of the test after three months' treatment by the multidisciplinary team at the day-care hospice in the surveyed pa-

tients show significant improvement in all subscales of overall mental health.

Discussion

The results of our research show that physical treatment given at the day-care hospice, which assumes professionally run active group exercises and individual treatment adjusted to each patient, leads to improvement of the overall physical health in the subscales of physical functioning and general health. The study by Turner et al (7), as a pilot study on 10 patients who had completed therapy for breast cancer, showed that suitably structured exercises of moderate intensity help to reduce the feeling of fatigue, improve mood and improve physical functioning and general health. The importance is mentioned of

Table 2 Mental health of surveyed patients before and after treatment

Scales	Examined patients (n = 35)		
	Starter testing	Testing after three months	P
Mental Health	0.24 (0.20 - 0.31)	0.72 (0.65 - 0.76)	< 0.0001
Role - Emotional	0.33 (0.33 - 0.33)	0.66 (0.33 - 0.66)	0.0001
Social Functioning	0.25 (0.25 - 0.25)	0.75 (0.62 - 0.75)	< 0.0001
Vitality	0.25 (0.20 - 0.35)	0.65 (0.60 - 0.70)	< 0.0001
Mental Component Summary	0.26 (0.23 - 0.30)	0.65 (0.59 - 0.70)	< 0.0001

Presented as Median (Interquartile range)

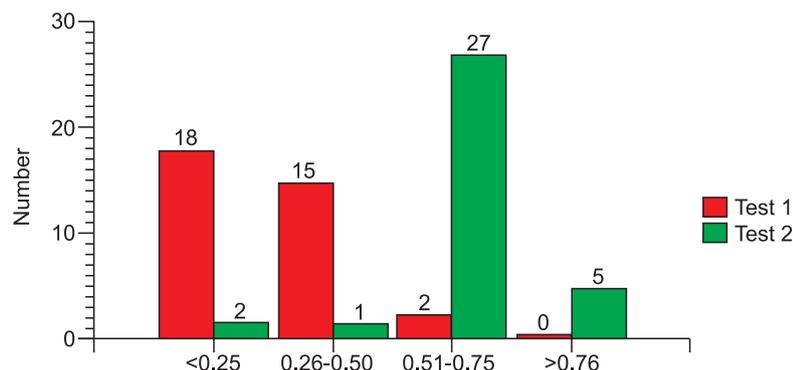


Figure 2 Overall mental health of surveyed patients before and after treatment. Test 1 – the number of patients before treatment; Test 2 – the number of patients after treatment

medical professionals, but also the mutual support given by to each other during the exercises, which improves mutual communication and some scales of mental health.

From the results of our study, the conclusion arises that continuous and suitably chosen physical treatment at a day-care hospice brings a statistically significant improvement in overall physical health. In the research undertaken by Sheree et al. (12) physical activity was monitored in 287 patients with breast cancer for 6, 12 and 18 months after the end of oncological therapy. About 80% of the patients went through three phases of testing, but it was shown that only one third of patients, who had continuity and were led by professionals in appropriate group physical therapy, showed improvement in their general physical health. The study also suggests the existence of a large number of patients who were insufficiently physically active or were not led by professionals in their physical activities.

The results of our study also showed that patients who were treated in group and individual psychotherapy exercises, stimulated by occupational therapy and medical staff, with the support of other patients, had better results for overall mental health, with clear improvement in the sub-scales of mental health, social functioning and vitality. The testing conducted by Plass and Koch (13) on 132 patients with breast cancer at the oncology clinic of the University Hospital in Hamburg showed that 37 patients who took part in sessions of group psycho-social support and in self-help groups run by other patients had much better results in the sub-scales of mental health, social functioning and vitality. The other 95 patients mentioned as the main reason for not taking part insufficient support from their family and friends, but also their doctors, who did not advise them or refer them to psychotherapy, and they also had poorer results in all sub-scales of mental health.

In our study overall physical health in two patients, on the second test after three months of treatment at the day-care hospice, was assessed as excellent, with more than 0.76 points, whilst in 5 patients on the second test their overall mental health was also assessed as excellent. Analysis shows that these were younger patients (42 to 45 years of age), who had undergone minimal surgical intervention (segmentectomy or tumerectomy) and did not receive chemotherapy. The study by Ganca et al. (14) which compared physical and mental health in older (more than 65 years) and younger patients with breast cancer, showed better results for physical and mental health in younger patients. Similar to our study, Deborah et al. (15) showed that younger patients who underwent a partial mastectomy and who did not receive chemotherapy, had significantly better results for mental and physical health than older patients with total mastectomies and repeated chemotherapy.

Limitations of the research

In the study design used there is a time shift of 3 months between the 2 assessments, which means that unknown disturbing variables could not be controlled.

Conclusion

The severity of mental and physical problems which come with the diagnosis and treatment of breast cancer, damaged body image and psychosocial disturbances, are easier to overcome if there is adequate and professional support.

This study confirms this unambiguously, showing improvements in all aspects of mental health and most aspects of physical health in patients who received that support through treatment by a multidisciplinary team at a day-care hospice.

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