

A comprehensive investigation of radio-oncology in breast cancer patients based on psychological and radiological problems in these patients

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Abstract

Breast cancer is one of the most common cancers and a common cause of death among women in the world. Breast tissue is dense in young people, and with age, fat tissue gradually replaces dense breast tissue. Despite the severe prognosis and high morbidity and mortality, the patient's prognosis will be better if diagnosed early.

Materials and methods: The current research is a clinical trial with an experimental and control group. The statistical population of the present study is all patients diagnosed with breast cancer who referred to Imam Khomeini Hospital in Tehran in 1402. Patients with breast cancer were selected for inclusion in the study. According to the statistician's opinion, 60 people were selected as available. The random replacement method and covariance analysis method were used to control the initial significant differences.

Conclusion: The results of this study show that psychological treatments have an effect on psychological components related to cancer diseases and treatment based on acceptance and commitment can help the patient to see negative thoughts and conditions of his illness as an acceptable part. Taking advantage of the therapeutic approach based on acceptance and commitment has been able to help improve the cognitive regulation of emotions in breast cancer patients and reduce the pain anxiety of these patients. Get to know themselves, be able to observe their negative emotions, identify their negative thoughts, learn ways to reduce the judgmental view of these thoughts, express their thoughts and concerns easily in a therapy team, and with the help of each other, deal with the stresses of the therapeutic environment. Actively adapt. According to the above, the present study was conducted with the aim of comprehensive investigation of radio-oncology in breast cancer patients based on psychological and radiological problems in these patients.

Key words: radio-oncology, breast cancer, psychological problems

Introduction

Today, breast cancer is one of the most common cancers and a common cause of death among women in the world (1). Breast tissue is dense in young people, and with age, fat tissue gradually replaces dense breast tissue. Despite the severe prognosis and high morbidity and mortality, the patient's prognosis will be better if diagnosed early. Early detection of breast cancer is the ultimate goal of radiology, and the role of the radiologist is very crucial at this stage. Breast cancer is the most common cancer among women, and lung and stomach cancer is the third most common cancer among (2). Approximately one out of every nine

women will be diagnosed with this disease during their lifetime, and the 5-year survival rate for breast cancer is It is 75% (3). Breast cancer accounts for 4.4% of all malignancies in Iran, and according to the Ministry of Health and Medical Education, breast cancer is the most common malignancy among women and its incidence rate is 6.36 cases per thousand women (4). Although the highest incidence rate of this disease is related to the countries of Northern Europe and America, in the last few years, we have seen that the incidence of new cases has decreased in these countries, while the rate of infection is still increasing in African, Asian countries. goes through

(5). The average age of infection in western societies is 48 years, but the current information in our country indicates that the age of infection in Iran is about a decade younger. There has been a decrease of 15 in the mortality of women aged 40-49 (6). Considering the incidence of breast cancer at younger ages in recent years and the presence of dense breast tissue in this group and the possibility of the lesion remaining hidden in this type of tissue, it seems necessary to have a complementary diagnostic method to increase the sensitivity of diagnosis. Factors such as exposure to radiation, obesity, liver diseases, use of drugs containing estrogen, as well as genetic factors are also mentioned in the category of breast cancer risk factors. The common methods of breast cancer diagnosis are mammography, ultrasound, and in later stages, MRI. Analyzing mammography images for screening healthy people with and suspected of cancer is a common diagnostic method(7). Misdiagnosis can have negative effects on the implementation of the treatment process, cost of time and mental stress for the patient. Early detection of breast cancer increases the chance of encountering and appropriate treatment and thus prolonging life (8). The definitive way to diagnose breast cancer is to perform a biopsy test, but it is recommended to perform it only in stages where the probability of cancer is high. . On the one hand, the biopsy test process is not favorable for the patient due to its invasiveness, and it also has psychological and economic effects for the patient. After mammography, clinical evaluations and biopsies are performed if tissue suspicious for cancer is observed (9). Among women who undergo breast cancer screening, about 10% are called back for re-evaluation, of which usually about 8-10% are suspicious of abnormal findings in the mammography image, for which a biopsy is performed (10). Most of the lesions in the breast tissue that can have symptoms of breast cancer are calcification and mass. In breast cancer, the disease usually starts in the lobules or ducts of the breast and then it can penetrate through the ducts and walls of the glands and the tissues It attacks the surrounding fat or even other parts of the person's body (11). There may be other lumps in the breast that are not cancerous, but in any case, the doctors are responsible for the final diagnosis. According to the mentioned materials, the present study was conducted

with the aim of comprehensive investigation of radio-oncology in breast cancer patients based on psychological and radiological problems in these patients.

Method

The current research is a clinical trial with an experimental and control group. The statistical population of the present study is all patients diagnosed with breast cancer who referred to Imam Khomeini Hospital in Tehran in 1402. Patients with breast cancer were selected for inclusion in the study. According to the statistician's opinion, 60 people were selected as available. Then these people are randomly divided into two groups of 30 people, control and test. The group therapy method based on acceptance and commitment was implemented during 8 group sessions, two sessions per week for the experimental group and 8 group sessions without the content of commitment and acceptance for the control group, and after one week of the sessions, the post-test was taken from the two groups. . It should be noted that written permission was obtained from the treatment participants to implement this treatment process; The therapy sessions were conducted by a doctor of psychology in the meeting room of Imam Khomeini Hospital in Tehran. It should be noted that patients could continue their physical treatments along with psychotherapy sessions. The criteria for inclusion in the study include diagnosis of breast cancer, personal information about the type and severity of the disease, middle school education, being in the process of breast cancer treatment at Imam Khomeini Hospital, and not having any accompanying physical diseases such as liver, heart and kidney diseases that affect the process of psychological treatment. To be cognitively effective, not receiving anti-anxiety and anti-depressant drugs, absenteeism for more than two sessions was also a criterion for exclusion from the study. Also, at any stage of the research, the patients could withdraw from the continuation of the sessions if they wished. It should be noted that primary significant differences were controlled by random replacement method and covariance analysis method. The research intervention was carried out by the person responsible for therapeutic interventions who was a doctor of psychology.

Table 1. Description of treatment sessions based on commitment and acceptance

meeting	The content of the meetings
First	Establishing a therapeutic relationship, introducing people to the topic of the sessions and concluding a therapeutic contract
Second	Talking about anxiety and worries, discovering and examining the patient's treatment methods and evaluating their effectiveness, receiving feedback and presenting assignments
Third	Helping people recognize ineffective coping strategies and realize their futility Accepting painful personal events without confronting them using metaphors (e.g., thoughts written on billboards
Fourth	Explaining about avoiding painful experiences and being aware of its consequences, teaching the next steps, accepting the change of language concepts with metaphors (for example, illness is a part of

	you, not all parts of you, familiarity with body postures, teaching body relaxation, feedback and presenting homework
fifth	Introducing a three-dimensional behavioral model in order to express the joint relationship between behavior/emotions, psychological functions and observable behavior, discussing efforts to change behavior based on that feedback, and presenting assignments.
sixth	Explaining the concepts of the role and context of observing oneself as a platform and making contact with oneself using the analogy of awareness of different perceptions and separation from sensations that are part of mental content, for example, eating with mindfulness), feedback and presenting assignments
seventh	Explaining the concept of values, creating motivation for change and empowering clients for a better life, focused practice, feedback and assignment presentation
Eighth	Teaching the commitment to the implementation of behavioral plans in accordance with the values and creating the commitment to act on it, summing up the meetings

Discuss

In general, the purpose of screening is early detection of breast cancer. Dense breast tissue is one of the limitations of mammography. In this study, the age of about half of the patients was 40 years and below, which is considered a low age range, and at this young age, the density of breast tissue is high. Abscess was reported, while there were positive findings in the mammography of 18 patients (12) and no findings were seen in 3.14 patients or only an asymmetric density was reported. In a study, a review and comparison was made between ultrasound mammography in the evaluation of breast masses and it was stated that the use of both mammography and ultrasound methods together has a higher sensitivity than performing one

method alone, especially in lactating, pregnant and young women (13). considered that density is the limiting factor of mammography, ultrasound increases diagnostic sensitivity in another study that was conducted on 2809 patients who had increased density in at least one quadrant of the breast, the accuracy of mammography was 78 and ultrasound was 90, and it was stated that Complementary screening method is more useful in increasing the detection rate of breast cancer (14). In the recent study, one of the investigated cases was multifocal multicentric cancer (MMBC), in which only one asymmetric density was seen in mammography, but at least 3 hypoechoic foci were seen in complementary ultrasound (15).

Table 2. Demographic information of study groups

P-value	statistical test	Control	test	Variable	
0/7	x ² =0/4	12	10	Single	Marital status
		25	23	married	
		3	7	divorced	
0/6	t=-/2	5.7 ± 4.40	1.4±5.40	Average±standard deviation	Age

In a study conducted by VT Yang et al., 45 in mammography and 88 in ultrasound were observed lymphadenopathy (16). In the present study, 30% of regional lymph nodes were observed in mammography and 60% in ultrasound, which is consistent with the

mentioned studies. In a study conducted by Wendy Berg et al., it was stated that in addition to mammography, a suitable auxiliary screening technique should be used, and this study recommended MRI for high-risk women and ultrasound for women with moderate risk (17).

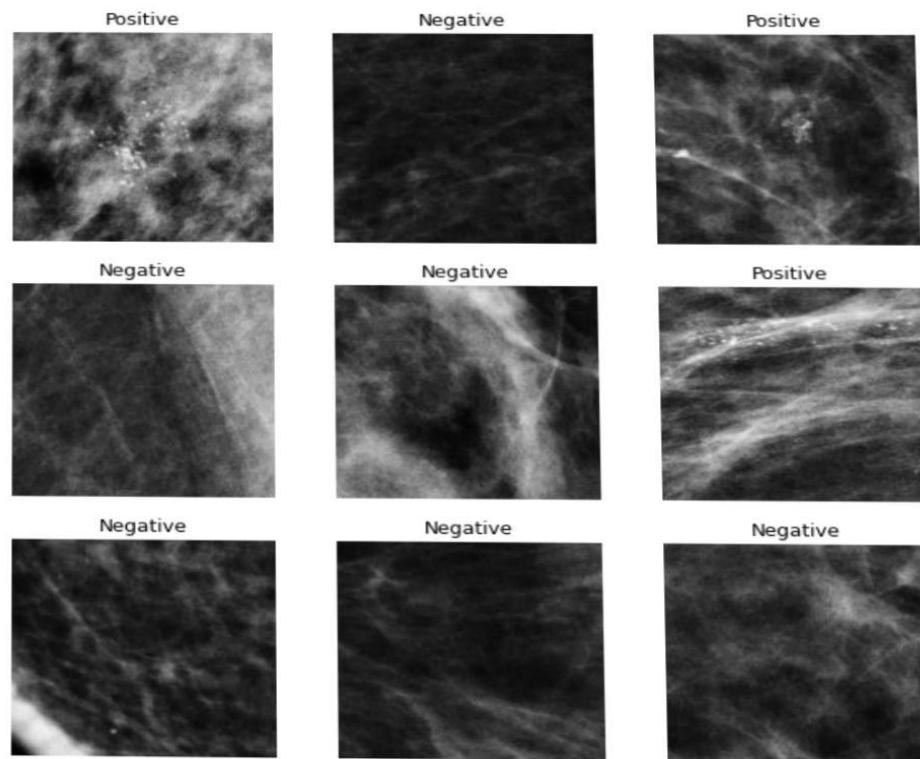


Fig 1. Normal tissue sample containing calcification lesions

The results of the present study show the decrease in the age of breast cancer in patients, despite the screening program, most of the breast cancer patients still come in the lump stage, and while the purpose of screening is early detection of cancer in the microcalcification stage, our patients with large lumps have an average size of 29 mm.m) refer to this, while years before the formation of the mass, the process of progression towards cancer has been formed. Also, despite extensive training on bloody discharge as a symptom of breast cancer, there was no bloody discharge in any of our patients (18).

Conclusion

Breast cancer screening is the best strategy available to reduce breast cancer mortality. To detect small cancer, mammography is more sensitive than breast examination, but mammography does not detect breast cancer in 10-15% of cases (19). Motamed states in his study that there is no comprehensive and universal program of breast cancer screening by mammography in Iran and it seems that along with the improvement of education, breast cancer screening should be carried out in women who are more likely to get breast cancer in terms of risk factors. It was more emphasized. The results of this study show that psychological treatments have an effect on the psychological components related to cancer diseases and the treatment based on acceptance and commitment can

help the patient to see negative thoughts and conditions of his illness as an acceptable part (20). Taking advantage of the therapeutic approach based on acceptance and commitment has been able to help improve the cognitive regulation of emotions in breast cancer patients and reduce the pain anxiety of these patients. Get to know themselves, be able to observe their negative emotions, identify their negative thoughts, learn ways to reduce the judgmental view of these thoughts, express their thoughts and concerns easily in a therapy team, and with the help of each other, deal with the stresses of the therapeutic environment. Actively adapt. According to the above, the present study was conducted with the aim of comprehensive investigation of radio-oncology in breast cancer patients based on psychological and radiological problems in these patients.

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