

Jose Maria Pereira de Godoy¹, Maria de Fatima Guerreiro Godoy²

¹Medicine School of Sao Jose do Rio Preto-FAMERP-Brazil, São José do Rio Preto, Brazil

²Clinica Godoy, Sao Jose do Rio Preto, Brazil

Anxiety in women with lymphedema following treatment for breast cancer

Abstract

Introduction: The aim of the present study was to evaluate anxiety in women with lymphedema following treatment for breast cancer.

Material and methods: A cross-sectional study was conducted involving 32 consecutive patients with lymphedema stemming from breast cancer treatment. Women with lymphedema due to other causes were excluded. Anxiety was evaluated using the Beck Anxiety Inventory. Descriptive statistics were used for the analysis of events.

Results: Among the 32 patients evaluated, 10 (31.25%) had a minimal level of anxiety, 10 (31.25%) had mild anxiety, seven (21.85%) has moderate anxiety and had mild to moderate depression and five (15.62%) had severe anxiety.

Conclusions: In this study anxiety occurs in different degrees in women with lymphedema following treatment for breast cancer of moderate to severe anxiety.

Psychiatry 2019; 16, 4: 175–177

Key words: lymphedema, anxiety, breast cancer, treatment

Introduction

Breast cancer is the most frequent form of cancer among women and among the three most prevalent forms of all types of cancer (11.6%) [1]. Analyzing mortality trends due to breast cancer in 36 European countries and the European Union between 1970 and 2014, a reduction is seen from 17.9/100,000 women in 2002 to 15.2/100,000 in 2015, with a predicted rate of 13.4/100,000 by 2020. The drop was greater among younger women (20 to 49 years, 22% reduction between 2002 and 2012) and the largest drop found in the United Kingdom [2]. In Brazil, 59,700 new cases of breast cancer are expected in the current two-year period (2018–2019), with an estimated risk of 56.33 out of every 100 thousand women. In 2016 a mortality for breast cancer rate was 15.4 deaths in Brazil [3]. Breast cancer is the second major cause of death among women in the United States [4].

Although divergences of opinion have been found in recent years regarding the diagnosis and treatment of this disease, it is important to detect and treat breast cancer

as early as possible. Detection is performed with imaging techniques and biopsy. The treatment options for women with breast cancer are surgery, radiotherapy, chemotherapy and molecular treatments. Breast reconstruction is an elective procedure and the Brazilian public healthcare system offers this option to all women who desire it [5]. One of the complications that may arise after treatment is lymphedema, which is the incapacity of the lymphatic system to mobilize protein and macromolecules from the cellular interstitium [6]. This condition exerts an effect on functional status. The accompanying edema, loss of joint mobility, increase in weight and bodily asymmetry, along with the disfigurement stemming from a mastectomy, can lead to depression, anxiety and fear regarding what the future may hold, thereby directly interfering with overall quality of life [7].

Like depression, anxiety is a mental illness, but to define anxiety in the point of view of psychiatry seems quite divergent by the fact that the concept is used under the control of different and associated events [8]. From the psychological standpoint, the main manifestation of anxiety is described as a vague, nonspecific sensation of some type of threat to one's wellbeing [9]. Anxiety and fear are recognized as being pathological when disproportional to the stimulus or qualitatively divergent from what is seen as

Adres do korespondencji:

Jose Maria Pereira de Godoy
Medicine School of Sao Jose, do Rio Preto-FAMERP-Brazil
Rua Floriano Peixoto, 2950
15.020-010 São José do Rio Preto, Brazil
e-mail: godoyjmp@gmail.com

normal for a particular age group, with negative impacts on quality of life, emotional comfort and the performance of activities of daily living [10]. An individual in a state of anxiety may focus on a single aspect that exerts an influence on how fears and concerns are manifested, which often become excessive, painful and pathological. Anxiety most often appears to be related to future prospects.

The aim of the present study was to evaluate anxiety in women with lymphedema stemming from treatment for breast cancer.

Material and methods

Participants and setting

This study was developed at the Godoy Clinic in São José do Rio Preto, Brazil, involving 32 women 45 to 76 years of age (mean: 61.5 years) with lymphedema stemming from breast cancer treatment.

Study design

A cross-sectional study was conducted with 32 consecutively recruited women.

Inclusion criteria

Women with a clinical diagnosis of lymphedema stemming from breast cancer treatment were included in the present study. Lymphedema was defined as a volume ≥ 200 mL greater in one limb compared to the contralateral limb at the initial evaluation prior to inclusion in the rehabilitation group.

Exclusion criteria

Women with lymphedema who had not undergone breast cancer treatment and lymphedema due to other causes were excluded from the study.

Development of study

All participants were submitted to an evaluation using the Beck Anxiety Inventory [11], which is a self-report measure with 21 multiple-choice items used to determine perceptions of anxiety. The items address different symptoms and each item has four scored response options: 0 = not at all, 1 = mildly, 2 = moderately and 3 = severely. The reliability of the scale depends exclusively on the patient's honesty when completing the questionnaire. The total ranges from 0 to 63 points and is interpreted as follows: 0 to 7 points = minimal anxiety; 8 to 15 points = mild anxiety; 16 to 25 points = moderate anxiety; and 26 to 63 points = severe anxiety.

Statistical analysis

Descriptive statistics were used for the analysis of events.

Ethical considerations

This study received approval from the Human Research Ethics Committee of the São Jose do Rio Preto School of Medicine (certificate number: 2.541.206). All participants signed a statement of informed consent.

Results

Among the 32 patients evaluated, 10 (31.25%) had a minimal level of anxiety, 10 (31.25%) had mild anxiety, seven (21.85%) has moderate anxiety and had mild to moderate depression and five (15.62%) had severe anxiety.

Discussion

The present findings show moderate to severe anxiety in 37% of women with lymphedema stemming from treatment for breast cancer. The literature offers few studies on anxiety in these patients, but body image is one of the influential factors in this respect. Two bodily issues coincide in women having undergone treatment for breast cancer — the disfigurement resulting from the removal of the breast, which is a symbol of womanhood that is associated with pleasure, sensuality, sexuality and motherhood [12], and lymphedema, which is a dimorphism of the arm on the operated side [13]. This process causes a change in the life course of these women that requires a coping response and adaptation to the new situation, which does not always occur.

Women with lymphedema stemming from treatment for breast cancer report a set of negative factors that can occur simultaneously, such as the fear of the recurrence of the tumor, pain, changes in activities of daily living [14], changes in family relations and fear with regard to the future, all of which can contribute to anxiety. The initial diagnosis as well as its association with death and the adverse effects of treatment can trigger anxiety, which is often not addressed and can consequently continue for long periods, compromising emotional, physical, psychological and social aspects of the patient's life. Therefore, a multidisciplinary team should be involved beginning with the early phase of treatment, with interventions to ensure that patients maintains their physical activities and receive supports with regard to adapting to the changes to come and the maintenance of healthy family relations. Health professionals should understand the correlation between coping and anxiety to be able to develop measures that can help these patients choose effective coping strategies and reduce their level of anxiety.

Conclusion

In this study anxiety occurs in different degrees in women with lymphedema following treatment for breast cancer of moderate to severe anxiety.

References

1. Ferlay J, Shin HR, Bray F, et al. Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. *Int J Cancer*. 2010; 127(12): 2893–2917, doi: [10.1002/ijc.25516](https://doi.org/10.1002/ijc.25516), indexed in Pubmed: [21351269](https://pubmed.ncbi.nlm.nih.gov/21351269/).
2. Carioli G, Malvezzi M, Rodriguez T, et al. Trends and predictions to 2020 in breast cancer mortality in Europe. *Breast*. 2017; 36: 89–95, doi: [10.1016/j.breast.2017.06.003](https://doi.org/10.1016/j.breast.2017.06.003), indexed in Pubmed: [28988610](https://pubmed.ncbi.nlm.nih.gov/28988610/).
3. Instituto Nacional de Câncer (INCA). Estimativa 2018/Incidência de Câncer no Brasil. <http://www.inca.gov.br>.
4. Peart O. Breast intervention and breast cancer treatment options. *Radiol Technol*. 2015; 86(5): 535M–558M–quiz 559–62.
5. Senado Federal noticia. <https://www12.senado.leg.br/.../lei-garante-reconstrucao-da-mama-em-seguida-a-retirada>.
6. de Godoy JM, Godoy Md. Evaluation of a new approach to the treatment of lymphedema resulting from breast cancer therapy. *Eur J Intern Med*. 2013; 24(1): 59–62, doi: [10.1016/j.ejim.2012.08.008](https://doi.org/10.1016/j.ejim.2012.08.008), indexed in Pubmed: [22964259](https://pubmed.ncbi.nlm.nih.gov/22964259/).
7. Pereira de Godoy JM, Da Silva SH, De Fatima Guerreiro Godoy M. Mechanisms used to face difficulties encountered following surgical treatment for breast cancer. *Afr J Psychiatry (Johannesbg)*. 2009; 12(1): 75–76, indexed in Pubmed: [19526651](https://pubmed.ncbi.nlm.nih.gov/19526651/).
8. Cameron OG, Thyer BA, Nesse RM, et al. The differential diagnosis of anxiety. *Psychiatric and medical disorders*. *Psychiatr Clin North Am*. 1985; 8(1): 3–23, indexed in Pubmed: [3887337](https://pubmed.ncbi.nlm.nih.gov/3887337/).
9. Roberson-Nay R, Eaves LJ, Hettema JM, et al. Childhood separation anxiety disorder and adult onset panic attacks share a common genetic diathesis. *Depress Anxiety*. 2012; 29(4): 320–327, doi: [10.1002/da.21931](https://doi.org/10.1002/da.21931), indexed in Pubmed: [22461084](https://pubmed.ncbi.nlm.nih.gov/22461084/).
10. de Beurs E, Beekman AT, Deeg DJ, et al. Predictors of change in anxiety symptoms of older persons: results from the Longitudinal Aging Study Amsterdam. *Psychol Med*. 2000; 30(3): 515–527, doi: [10.1017/s0033291799001956](https://doi.org/10.1017/s0033291799001956), indexed in Pubmed: [10883708](https://pubmed.ncbi.nlm.nih.gov/10883708/).
11. Leyfer OT, Ruberg JL, Woodruff-Borden J. Examination of the utility of the Beck Anxiety Inventory and its factors as a screener for anxiety disorders. *J Anxiety Disord*. 2006; 20(4): 444–458, doi: [10.1016/j.janxdis.2005.05.004](https://doi.org/10.1016/j.janxdis.2005.05.004), indexed in Pubmed: [16005177](https://pubmed.ncbi.nlm.nih.gov/16005177/).
12. Guerreiro Godoy Md, Pereira de Godoy AC, de Matos MJ, et al. Phantom breast syndrome in women after mastectomy. *Breast J*. 2013; 19(3): 349–350, doi: [10.1111/tbj.12115](https://doi.org/10.1111/tbj.12115), indexed in Pubmed: [23600683](https://pubmed.ncbi.nlm.nih.gov/23600683/).
13. Paskett ED. Symptoms: Lymphedema. *Adv Exp Med Biol*. 2015; 862: 101–113, doi: [10.1007/978-3-319-16366-6_8](https://doi.org/10.1007/978-3-319-16366-6_8), indexed in Pubmed: [26059932](https://pubmed.ncbi.nlm.nih.gov/26059932/).
14. Guerreiro Godoy Md, Pereira de Godoy LM, Barufi S, et al. Pain in breast cancer treatment: aggravating factors and coping mechanisms. *Int J Breast Cancer*. 2014; 2014: 832164, doi: [10.1155/2014/832164](https://doi.org/10.1155/2014/832164), indexed in Pubmed: [25349741](https://pubmed.ncbi.nlm.nih.gov/25349741/).