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Auricular acupressure in the quality of life of women with breast cancer: a randomized clinical trial*

Acupressura auricular na qualidade de vida de mulheres com câncer de mama: ensaio clínico randomizado

Acupresura auricular en la calidad de vida de mujeres con cáncer de mama: ensayo clínico randomizado

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ABSTRACT

Objective: To evaluate the effects of an auricular acupressure intervention on the quality of life of women with breast cancer undergoing chemotherapy compared with those who did not undergo the intervention. **Method:** A randomized clinical trial with 54 women followed weekly for 12 weeks, with 27 being allocated to the intervention group in which crystal pellets were applied to six acupoints (shen men, kidney, stomach, cardia, brainstem and endocrine), and 27 in the control group. Quality of life was measured in five stages; the first before starting the intervention, and the following stages every three weeks using the Quality of Life Questionnaire - Core 30 and the Quality of Life Questionnaire - Breast Cancer BR-23 instruments. **Results:** There was improvement in all domains related to quality of life; however, there was significance regarding nausea, vomiting and breast symptoms in the intervention group. **Conclusion:** Auricular acupressure has proven to be a safe, effective, low cost method with no side effects and easily applicable by trained nurses. It may be recommended as complementary therapy in treating breast cancer to improve the quality of life of these women. The study was registered in the Brazilian Registry of Clinical Trials with the code no. RBR-36zcfg.

DESCRIPTORS

Breast Neoplasms; Auriculotherapy; Quality of Life; Oncology Nursing; Complementary Therapies.

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INTRODUCTION

Breast cancer in its multiple manifestations is a major public health challenge in Brazil. The estimate for the 2018-2019 biennium is 59,700 new cases each year, and mortality by 2020 is estimated to be 20,626 cases. Of these, 56.5% will occur in women under 65 years of age. The prevalence in the South, Southeast, Midwest and Northeast Regions represents 28.1% of all cases, excluding non-melanoma skin tumors[1-2]. Although there is significant growth in the number of cases, advances throughout the clinical chain have occurred with a broad spectrum of therapeutic mobilization and approaches[3].

Late diagnoses of breast cancer lead to more aggressive treatments, with a consequent increase in morbidity. Its effects may cease along with the chemotherapy cycle, last for long periods or perpetuate[4]. However, multidisciplinary treatments not only focusing on its cure, but also on reducing the multiple effects caused by systemic treatment have been implemented with increasing tendency in oncology, especially in assimilating complementary treatments[5-6], which can positively impact on the quality of Life (QoL) of these patients[7-8].

In taking into account the perceptions of several authors, it appears that the QoL concept is difficult to standardize. The World Health Organization (WHO) defines it as "the perception of the individual and their position in life in the context of their culture and the value systems in which they live in relation to their expectations, standards and concerns"[9]. This study adopts this concept because it understands that the disease, therapy and rehabilitation processes impact both the biological dimension as well the activities of daily living.

Progress in strategies for improving QoL can be noted by longer survival, reduced adverse effects of disease, relapse rate and treatment[10]. Complementary alternative therapies (CATs) have been highlighted among researchers as one of these strategies, as they go hand-in-hand with the classic actions of the offered treatments, in addition to presenting significant results in reducing symptoms related to treatment and disease[10].

Ancient acupuncture is one of the therapeutic instruments among CATs inserted in Traditional Chinese Medicine (TCM) which uses needles, magnets, pellets, mustard seeds or crystals to stimulate specific points which are called acupoints, in the prevention, maintenance or restoration of health. Its action on sensory fibers of the Peripheral Nervous System (PNS), called auriculotherapy (acupressure), fosters stimulation to promote the release of endorphins, cortisol, dopamine, serotonin and noradrenaline, which may cause well-being[7]. Thus, it has been used as healthcare in preventive and curative aspects[11].

Auricular acupressure can be implemented by an isolated approach or integrated with conventional treatments. It is a non-invasive technique which is considered effective in clinical practice to control the multiple effects of the disease and cancer treatment such as pain, nausea, vomiting, fatigue, insomnia, poor appetite and dry mouth in cancer patients[12-14]. Nurses are an active participant in the inter or multidisciplinary team; they receive and guide patients, as well as plan and implement care actions and plans with therapies which help women cope with this phase[15].

Due to nurses' greater proximity in the different treatment stages, it is understood that they should be prepared to propose actions and interventions that can help improve the QoL of cancer patients and their therapy. Thus, it is important to carry out studies evaluating the use of CATs, such as auriculotherapy, in order to verify its positive effects on the QoL of these patients to relieve and control the symptoms arising from the disease and treatment.

Therefore, the present study aimed to evaluate the effects of an auricular acupressure intervention on the quality of life of women with breast cancer undergoing chemotherapy treatment compared to those who did not undergo the intervention.

METHOD

Study design

A randomized controlled, parallel, and open clinical trial with a 1:1 ratio allocation into two groups: an intervention group (IG) who received an auricular acupressure intervention, and a control group (CG) which only received micropore® application onto the auricle (outer ear). The intervention was implemented by applying crystal pellets at six points chosen according to the main physical and emotional symptoms affected by breast cancer and chemotherapy treatment identified in the literature.

Population

The population sampling was non-probabilistic and consisted of all breast cancer patients who started treatment at the unit and who met the eligibility criteria. The lead researcher conducted a randomized selection to determine which group the first and second patients would be included using the Microsoft Office Excel® program. The IG was the first group randomized, meaning that the first patient included in the study was allocated into the intervention group, the second to the control group, and so on with a 1:1 allocation sequence. The allocation, enrollment and assignment sequence of the participants' interventions was thus performed by the lead researcher according to the patient's arrival to perform the treatment. The participants did not know whether they were receiving the intervention or the control. The study was not considered blind due to the fact that CG patients could perceive if there was the presence of a crystal pellet on their ear.

Selection criteria

The eligibility criteria implemented for this study were: women aged 18 years or older, diagnosed with breast cancer, receiving adjuvant, neoadjuvant or palliative chemotherapy treatment, regardless of disease stage or treatment phase, non-pregnant women, non-users of anxiolytic and/or antidepressant medications and who were available weekly for auricular acupressure treatment.

Discontinuity criteria included patients who were indicated to start antidepressant and/or anxiolytic medications during treatment, or who missed auricular acupressure sessions for more than two weeks, withdrew, died, or who experienced impeding symptoms such as dizziness or excessive discomfort at the acupressure site. The study was conducted at the Hematology and Oncology Outpatient Clinic of a public teaching hospital (a reference in the southern region of Brazil) from March 2017 to April 2018.

Data collection

The IG was submitted to a closed protocol of auricular acupressure with crystal pellets in weekly sessions for a period of 12 weeks. Each research participant received a minimum of 10 and a maximum of 12 sessions. The skin was disinfected with 70% alcohol to reduce the local microbiota prior to placing the crystal pellets onto the outer ear. The point location was subsequently identified using an acupuncture point locator pen, and the crystal pellets were fixed to both ears with skin-colored micropores®. The chosen points were: Shenmen (has analgesic action and reduces stress and anxiety); stomach and cardia (to reduce nausea and vomiting); endocrine (for hormonal regulation); brainstem (has sedative action); and kidney (to promote body homeostasis).

After placing the crystal pellets, the patients received a folder prepared by the researcher with instructions to moderately press the site for five minutes, three times a day: morning, afternoon and night, performing a stimulation of the points. They were instructed to carefully dry their ears and avoid detaching the micropores®. The crystal pellets were removed by the trained team at each weekly return for a new session to apply the intervention in which new ones were replaced at the points after skin cleansing and spot location, thus remaining until the next session.

Data collection and the intervention were performed by the unit's nurses. They received practical training by an acupuncture nurse specialist aiming at recommendations and restrictions on standardizing the approach and procedures for both groups of participants. The team involved in the study was composed of three nurses qualified to perform auriculotherapy, two trained nurses and an assistant physician responsible for releasing patients who met the eligibility criteria to participate.

The CG participants received only hypoallergenic micropore® application in the same regions/acupoints. The same technique which was used in the IG, with weekly applications for the same period of 12 weeks in both ears was implemented; however, without the presence of the crystal pellets. The CG was not instructed to perform pressure on the acupoints as described in the IG in order to avoid manual stimulation of the points and possibly interfering in the results. However, they also received a folder which only contained instructions to carefully dry their ears to prevent the micropores® from detaching from the skin.

The aim for the primary outcome was to improve the overall QoL of participants after auricular acupressure. As a secondary outcome, it was intended to verify which chemotherapy and cancer symptoms can be minimized with auricular acupressure. Both QoL and symptom occurrence were measured by applying the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (QLQ-C30) – version 3.0, and the Quality of Life Questionnaire Breast Cancer 23 (QLQ-BR23)[16] in five stages: in the participant's inclusion before the intervention and then sequentially every three weeks.

The QLQ-C30 consists of 30 items divided into: five functional scales (physical, cognitive, emotional, social and performance), three symptom scales (fatigue, nausea and pain), six individual items (dyspnea, insomnia, loss of appetite, constipation, diarrhea and financial difficulties) and two questions about general health. The QLQ-BR23 is specific for breast cancer, and consists of 23 questions related to chemotherapy side effects, arm and breast symptoms, body image and sexual function.

Data analysis and processing

Regarding the statistical analysis procedures, sociodemographic and clinical data were analyzed by absolute and relative frequency. The data from the QoL questionnaires were processed according to the guidelines established in the Scoring Manual of the European Organisation for Research and Treatment of Cancer (EORTC), which states that the results of the questionnaires should be grouped on scales ranging from 0 to 100. High scoring for the functional scale and general health status represents a high level of functionality and better overall health status, meaning better QoL. Moreover, a high score for symptom scales represents a higher level of symptoms and problems, meaning lower QoL[17].

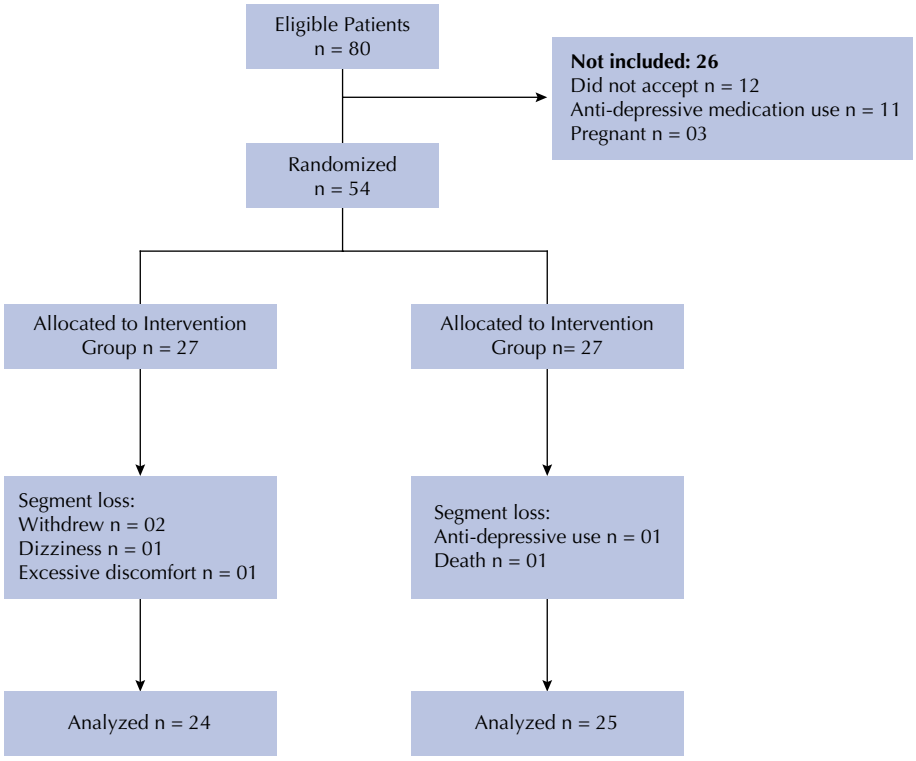
The non-parametric Mann Whitney test was applied to compare the groups, while the non-parametric Friedman test was applied for comparing the stages, complemented by the Least Significant Difference (LSD) multiple comparison test. The use of non-parametric tests is justified by the lack of normality of the collected data. This lack of normality was verified by the Shapiro Wilk test. The significance level employed was 5%.

Ethical aspects

The study was approved by the Research Ethics Committee of a Public Hospital of Paraná with opinion no. 2.098.890, and complied with Resolution 466/12 of the National Health Council for involving human beings. Participants were informed about the research and were allocated into the IG or CG after signing the Informed Consent Form. The study was registered in the Brazilian Registry of Clinical Trials (*REBEC – Registro Brasileiro de Ensaios Clínicos*) with the code no. RBR36zcfg. The QoL questionnaires were authorized for download through the research registry directly to the lead researcher responsible for the study.

RESULTS

As shown in Figure 1, eighty (80) women were selected to participate in the study; however, 54 of them were eligible and 27 were allocated into the intervention group and 27 to the control group.



Source: Adapted from CONSORT (2010).

Figure 1 – Inclusion flowchart, randomization and group analysis.

Regarding the sociodemographic and clinical data expressed in Table 1, the mean age in the IG was 51 years, while the mean age in the CG was 56 years, and 33% of participants were under 40 years. Married/stable union civil status represented 56% of women in the IG and 59% in the CG. Neoadjuvant treatment occurred in 70% of cases in IG, and 67% in CG.

Table 1 – Sociodemographic and clinical characterization of the research participants – Curitiba, PR, Brazil, 2017-2018. (n=54)

Variables	Intervention Group (IG)		Control Group (CG)	
	n=27	%	n=27	%
Age				
18 to 40 years	6	22	3	11
41 to 50 years	6	22	9	33
+50 years	15	56	15	56
Civil status				
Single	3	11	3	11
Married/stable union	15	56	16	59
Separated/divorced	3	11	4	15
Widowed	6	22	4	15
Education				
Never studied	5	19	1	4
Elementary	9	33	7	26
High School	7	26	16	59
Post-Secondary	6	22	3	11

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Variables	Intervention Group (IG)		Control Group (CG)	
	n=27	%	n=27	%
Staging				
I	3	11	1	4
II	11	41	15	56
III	10	37	8	30
IV	3	11	3	11
Type of treatment				
Adjuvant	5	19	6	22
Neoadjuvant	19	70	18	67
Palliative	3	11	3	11

Note: (n=54)

Regarding the QLQ-C30 questionnaire data expressed in Table 2, the emotional function on the functional scale obtained values of 75.5 in the IG and 67.1 in the CG. When the symptom scale was analyzed, it was observed that the symptoms fatigue and insomnia obtained the highest values at the beginning of treatment. Fatigue presented a mean value of 33.2 in the IG and 34.2 in CG in the five stages.

Table 2 – Descriptive data from the Quality of Life Questionnaire-Core 30 questionnaire obtained in the five research stages – Curitiba, PR, Brazil, 2017-2018.

Scores	*Quality of Life Questionnaire* – Core 30 (QLQ-C30)									
	Stage 1 (n=54)		Stage 2 (n=51)		Stage 3 (n=49)		Stage 4 (n=49)		Stage 5 (n=48)	
	Value		Value		Value		Value		Value	
	IG	CG	IG	CG	IG	CG	IG	CG	IG	CG
Overall QoL	67.6	70.7	65.9	69	70.3	66.3	70.7	68	71.4	71.9
Functional scale										
Personal performance	64.2	71.3	81.2	72	76.1	72.4	71.7	72	75.4	72.9
Emotional function	69.4	63.9	76.8	69.3	76.1	65.7	79	69	76.1	67.7
Cognitive function	66.1	67.9	76.1	76	75.4	71.2	76.1	72	75.4	73.6
Symptom Scale										
Nausea and Vomiting	19.8	15.4	14.5	10.7	10.9	13.5	12.3	12	5.1	12.5
Pain	28.4	36.5	29.7	25.3	26.1	26.9	31.9	22	29.7	27.1
Insomnia	32.1	39.5	26.1	33.3	27.5	30.8	24.6	36	23.2	31.9
Loss of appetite	24.7	19.8	21.7	13.3	23.2	16.7	21.7	18.7	21.7	20.8
Constipation	39.5	25.9	33.3	25.3	39.1	20.5	24.6	17.3	14.5	23.6

Note: (n=54).

The systemic effects in assessing the QLQ-BR23 symptom scale (Table 3) were high; in summing up the five steps, the IG had a value of 35 and the CG had 38.4. The arm symptoms presented the lowest values in the five stages.

Table 3 – Descriptive data from the Quality of Life Questionnaire Breast Cancer 23 obtained in the five stages of the study – Curitiba, PR, Brazil, 2017-2018.

Scores	*Quality of Life Questionnaire Breast Cancer 23*									
	Stage 1 (n=54)		Stage 2 (n=51)		Stage 3 (n=49)		Stage 4 (n=49)		Stage 5 (n=48)	
	Value		Value		Value		Value		Value	
	IG	CG	IG	CG	IG	CG	IG	CG	IG	CG
Functional scale										
Body image	62.7	64.4	68.3	71	75.6	68.6	74	71.5	73.2	77.5
Sexual function	77.3	74.7	75	80	74.6	77.1	74.6	70.6	69.7	72.2
Sexual satisfaction	59.5	51.9	57.6	51.5	36.4	62.2	47.6	53.3	49	60
Symptoms scale										
Systemic effects	42.1	38.3	39.5	39.8	34.6	39.6	31.3	38.1	27.5	36.3
Breast symptoms	25.8	19.5	22.5	19.5	23.5	10.6	10.6	11.3	12.3	15.6
Arm Symptoms	23.5	28.8	26.1	29	20.3	17.1	16.4	16.4	18.8	23.6

Note: (n=54)

Regarding the comparison between the groups (Table 4), there was no significant difference between the IG and CG in the QLQ-C30 measurement; however, there was a significant difference for arm symptom scores in relation to the QLQ-BR23 in the 2nd stage (p-value 0.036) and breast symptoms in the 3rd stage (p-value 0.025).

Table 4 – Significant QLQ-C30 and QLQ-BR23 scores in the comparison between groups and between stages in the five research stages – Curitiba, PR, Brazil, 2017-2018.

	Stages	p-value
Significant scores between the groups		
Arm symptoms (IG)	2nd stage	0.0360
Breast symptoms (IG)	3rd stage	0.0250
Significant scores between the stages		
Nausea and vomiting (IG)	1st and 2nd stage	0.0018
Breast symptoms (IG) (Total)	1st and 4th stage 1st and 5th stage	0.0004
Breast symptoms (IG)	1st and 4th stage 1st and 5th stage	0.0026

Note: (n=54)

DISCUSSION

The rehabilitation of cancer patients is considered one of the most relevant areas for health sciences. The search for better adaptations in preventing and controlling side effects, as well as the use of complementary therapies which prevent or minimize complications arising from the disease as a form of care has been a permanent effort to improve QoL[6,18].

TCM as a complementary instrument to conventional treatments has been gaining strength after its officialization by Ministry of Health Ordinance No. 971 of May 2006, which defined the National Policy of Integrative and Complementary Practices (*PNPIC – Política Nacional de Práticas Integrativas e Complementares*), implemented by the Unified Health System (*SUS – Sistema Único de Saúde*)[19], promoting the use of acupuncture and other forms of TCM as complementary therapeutic actions[9].

Identifying and knowing the socio-demographic and clinical profile enables to meet the specific needs of women and may guide health screening and care strategies throughout the care team. The results of this study indicate a decrease in the average age of women with cancer when compared to another study[6], which reported a trend of increasing cases among women up to 50 years of age. The age variable receives special attention when it shows significant or increasing changes, regardless of the Brazilian region, since the development of breast cancer is the leading cause of death among women[1].

The profile of married women or in a stable union represented an important portion of the total participants in the present study. This factor is not considered a risk for cancer development; however, it can negatively or positively interfere with these women's QoL, as they are often the main pillar for family support.

In a study[20] conducted to assess the perceptions and coping of women with breast cancer from diagnosis to treatment, the authors showed that the presence of a partner and children can provide a stable emotional supportive scenario for women, a higher chance of access to preventive services, or even protection along the therapeutic course. However, fear of abandonment by their companions and concern about the activities of their home and daily life can have a negative impact on their lives.

Although breast cancer has a good prognosis and offers a five-year probability of survival in 80% of the stage I and II[1] cases, 44% of the women in this study were in stage III and IV. This number does not represent the largest proportion of

cases; however, it is still considered high and leads to more aggressive treatments, with worse prognosis and decreased survival[20]. Nevertheless, when it is observed that neoadjuvant treatment was prevalent in this study, it is possible to envision a better QoL for these women, since such a treatment modality provides more conservative surgery and control of disease progression[21].

Regarding the QoL results measured by the QLQ-C30, the overall QoL was considered satisfactory for both groups, and although not significant, it can be suggested that auricular acupressure provided a small improvement in QoL in the IG, while the CG showed slight worsening during chemotherapy. In a retrospective study[21] conducted in the United States on the impact of acupuncture on the management of cancer symptoms, it was found that the intervention was significant in patients' QoL, emphasizing that women showed improvement in symptoms such as fatigue, anxiety, and physical and emotional suffering.

Emotional function related to depressive feelings of worry and irritation was the domain with the highest impairment in women's QoL in this study. The IG showed an increasing, albeit not significant, improvement compared to the CG, which remained stable at all stages. This suggests that auricular acupressure helped in managing these symptoms, thus improving QoL.

In a quantitative synthesis of randomized controlled trials with acupuncture in China aimed at investigating the stimulation of anxiety and depression acupoints in cancer patients, it was concluded that acupoints stimulation may be promising for treating psychological disorders in these patients. The result found could not be conclusive, however it can be interpreted as suggestive[22].

The nurse is a member of the multidisciplinary team, and needs to be prepared to understand the emotional suffering of breast cancer patients undergoing treatment and establish appropriate conducts to prevent possible depressive conditions, refer them to psychological and/or medical care if necessary, or provide complementary treatments such as ear acupressure, which have been effective.

Regarding the symptoms, nausea and vomiting are side effects related to systemic chemotherapy, much feared by patients who need to start treatment. Participants in this study reported having little nausea or vomiting during chemotherapy. However, this symptom showed a significant result in the IG, indicating its reduction during treatment. This suggests that auricular acupressure may be used as a complementary treatment to improve QoL.

A randomized clinical study[23] was conducted in Iran with 48 women diagnosed with breast cancer and undergoing chemotherapy with the objective to evaluate the effects of auricular acupressure on the relief of nausea and vomiting. Their results showed that the intervention significantly decreased the frequency and intensity of nausea and vomiting in both the acute and late stages. Thus, the study authors suggested its use as a complementary treatment to alleviate these symptoms.

Another symptom which had one of the highest values during treatment was constipation, considered as a gastrointestinal toxicity that interferes with daily activities and can lead to intestinal obstruction. In a randomized clinical trial conducted by nurses in Korea aimed at evaluating the effects of auricular acupressure using mustard seeds to relieve constipation caused by chemotherapy in 56 women with breast cancer, the results were positive in significantly improving constipation symptoms and QoL of these women. The authors concluded that because it is a safe, relatively easy to apply and successful method, auricular acupressure should be indicated and used as a complementary treatment[24].

A significant reduction in breast symptoms was found regarding the QLQ-BR 23 questionnaire, suggesting that auricular acupressure concomitant with chemotherapy is effective for these symptoms. Women reported improved breast pain, swelling and sensitivity throughout treatment. A similar result was observed in a study[13] conducted in the United States in 2015 involving 50 patients aiming to evaluate the analgesic potential of auricular acupressure in cancer pain. The results showed that the method is effective, highly acceptable to patients, and helped to reduce the use of analgesic medication during treatment.

Although the results of the present study were not significant for other domains evaluated by both questionnaires, it was observed that auricular acupressure may help to improve QoL of women with breast cancer. Therefore, it is important that both the nurse and other members of the multidisciplinary team recognize it as a complementary treatment and seek the necessary training in order to promote better care. Including specific measures to prevent or minimize the distress caused by the disease and treatment favors QoL and becomes essential for establishing a better prognosis for these patients.

This study presents limitations which could impact the results as well as the discussion of the findings. One of these may be related to the study duration, which provided a small number of participants to test the effects of auricular acupressure. Another limitation is related to the scientific evidence of auriculotherapy as a complementary treatment to reduce the impacts caused by the disease and treatment of breast cancer.

CONCLUSION

In analyzing the results, it can be stated that auricular acupressure improved the overall QoL of women with breast cancer undergoing chemotherapy. The intervention showed significant results on the symptom, nausea-vomiting and breast symptom scales; despite showing improvement in the intervention group for other physical and emotional symptoms, there was no significance.

Thus, this investigative study contributes to better understanding the effectiveness of complementary therapies such as auricular acupressure for possibly reducing symptoms when applied to patients with breast cancer undergoing chemotherapy and their consequent improvement in QoL.

It is noticed that there is a need for further studies on the subject so that other aspects in addition to the studied

perspectives are deepened to obtain greater assertiveness of alternative and complementary therapies. Thus, opportunities and paths can be created for new research, programs and public health services, care methodologies, drug applicability strategies and new intervention possibilities for nurses and other members of the multidisciplinary team.

RESUMO

Objetivo: Avaliar os efeitos da intervenção acupressura auricular na qualidade de vida de mulheres com câncer de mama em tratamento quimioterápico, em comparação com as que não utilizaram a intervenção. **Método:** Ensaio clínico randomizado com 54 mulheres, acompanhadas semanalmente por 12 semanas, sendo 27 no grupo intervenção, que utilizou esferas de cristal em seis acupontos (shenmen, rim, estômago, cárdia, tronco cerebral e endócrino), e 27 no grupo controle. A qualidade de vida foi mensurada em cinco etapas; a primeira, antes de iniciar a intervenção e as seguintes, a cada três semanas, com os instrumentos *Quality of Life Questionnaire Core 30* e *Quality of Life Questionnaire – Breast Cancer BR-23*. **Resultados:** Houve melhora em todos os domínios relacionados à qualidade de vida; porém, a significância foi para náusea, vômito e sintomas da mama no grupo intervenção. **Conclusão:** Acupressura auricular mostrou-se como um método seguro, eficaz, de baixo custo, sem efeitos colaterais, facilmente aplicável por enfermeiros treinados. Pode ser recomendada como terapia complementar no tratamento do câncer de mama para melhorar a qualidade de vida dessas mulheres. A pesquisa foi cadastrada no Registro Brasileiro de Ensaios Clínicos com o código nº RBR-36zcfg.

DESCRITORES

Neoplasias da Mama; Auriculoterapia; Qualidade de Vida; Enfermagem Oncológica; Terapias Complementares.

RESUMEN

Objetivo: Evaluar los efectos de la intervención acupresura auricular en la calidad de vida de mujeres con cáncer de mama en tratamiento quimioterápico, en comparación con las que no utilizaron la intervención. **Método:** Ensayo clínico randomizado con 54 mujeres, seguidas semanalmente por 12 semanas, siendo 27 en el grupo intervención, que utilizó esferas de cristal en seis acupuntos (shenmen, riñón, estómago, cardias, tronco cerebral y endocrino), y 27 en el grupo control. La calidad de vida fue medida en cinco etapas; la primera, antes de iniciar la intervención, y las siguientes, cada tres semanas, con los instrumentos *Quality of Life Questionnaire Core 30* y *Quality of Life Questionnaire - Breast Cancer BR-23*. **Resultados:** Hubo mejora en todos los dominios relacionados con la calidad de vida; sin embargo, la significación fue para náusea, vómito y síntomas de la mama en el grupo intervención. **Conclusión:** La acupresura auricular se mostró como un método seguro, eficaz, de bajo costo, sin efectos colaterales, fácilmente aplicable por enfermeros entrenados. Se puede recomendar como terapia complementaria en el tratamiento del cáncer de mama para mejorar la calidad de vida de dichas mujeres. La investigación fue registrada en el Registro Brasileño de Ensayos Clínicos con el código nº RBR-36zcfg.

DESCRIPTORES

Neoplasias de la Mama; Auriculoterapia; Calidad de Vida; Enfermería Oncológica; Terapias Complementarias.

REFERENCES

1. Instituto Nacional do Câncer José de Alencar Gomes da Silva. Estimativa 2018: incidência do câncer no Brasil [Internet]. Rio de Janeiro: INCA; 2018 [citado 2018 jun. 15]. Disponível em: http://www.inca.gov.br/estimativa/2018/estimativa-2018.pdf
2. World Health Organization. Global Cancer Observatory. Cancer incidence in five continents [Internet]. Geneva: WHO; 2012 [cited 2018 July 15]. Available from: http://ci5.iarc.fr/Default.aspx
3. Sing P, Chaturvedi A. Complementary and alternative medicine in cancer pain management: a systematic review. Indian J Palliat Care. 2015;21(1):105-15. DOI: 10.4103/0973-1075.150202
4. Silva DRF, Reis PED, Gomes IP, Funghetto SS, Leon CP. Non Pharmacological Interventions for Chemotherapy Induced Nauseas and Vomits: integrative review. Online Braz J Nurs [Internet]. 2009 [cited 2018 May 15];8(1). Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/j.1676-4285.2009.2098/463
5. Freire MEM, Sawada NO, França ISX, Costa SFG, Oliveira CDB. Health-related quality of life among patients with advanced cancer: an integrative review. Rev Esc Enferm USP. 2014;48(2):357-67. DOI: http://dx.doi.org/10.1590/S0080-6234201400002000022
6. Garcia SN, Galdino C, Castro GC, Jacowski M, Guimarães PRB, Kalinke LP. Quality of life domains affected in women with breast cancer. Rev Gaúcha Enferm. 2015;36(2):89-96. DOI: http://dx.doi.org/10.1590/1983- 1447.2015.02.45718
7. Reyna C, Lee MC. Breast cancer in Young women: special considerations in multidisciplinar care. J Multidiscip Health c. 2014;7:419-29. DOI: 10.2147/JMDH.S49994
8. Assi HA, Khoury KE, Dbouh H, Khalil LE, Mouhieddine TH, El Saghir NS. Epidemiology and prognosis of breast cancer in young women. J Thorac Dis. 2013;5 Suppl 1:S52-8. DOI: 10.3978/j.issn.2072-1439.2013.05.24
9. The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. Soc Sci Med. 1995;41(10):1403-9.
10. Nicolussi A, Picharillo C, Saraiva D, Paula J, Okino L, Sawada N. Quality of Life and Rehabilitation in Oncologic Patients. Rev Cultura Extensão USP. 2012;8:153-65. DOI: https://doi.org/10.11606/issn.2316-9060.v8i0p153-165
11. Souza MP. Tratado de auriculoterapia. Brasília: Novo Horizonte; 2012.
12. Kumar, JVR Uma M. Effectiveness of acupressure on improving the quality of sleep among cancer Patients. Asian J Nur Edu Res. 2015;5(4):513-7. DOI: 10.5958/2349-2996.2015.00105.6
13. Yeh CH, Chien LC, Chiang YC, Ren D, Suen LK. Auricular point acupressure as an adjunct analgesic treatment for cancer patients: a feasibility study. Pain Manag Nurs. 2015;6(3):285-93. DOI: 10.1016/j.pmn.2014.08.005

14. Kurebayashi LFS, Gnatta JR, Borges TP, Silva MJP. Applicability of auriculotherapy in reducing stress and as a coping strategy in nursing professionals. Rev Latino Am Enfermagem. 2012;20(5):980-7. DOI: http://dx.doi.org/10.1590/S0104-11692012000500021

15. Santos MV, Fonseca PMM, Silva NB, Rosa PC. Transtorno de conduta: atuação do enfermeiro. Rev Cient UMC [Internet]. 2017 [cited 2018 Jun 15];2(1):1-13. Available from: http://seer.umc.br/index.php/revistaumc/article/view/75/111

16. European Organization for Research and Treatment of Cancer Data Center. European Organization for Research and Treatment of Cancer Quality of Life Questionnaire – EORTC (QLQ C30) scoring manual [Internet]. Brussels, Belgium; 2001[cited 2014 May 10]. Available from: http://www.eortc.be/qol/files/SCManualQLQ-C30.pdf

17. Fayers PM, Aaronson NK, Bjordal K, Groenvold M, Curran D, Bottomley A. On Hehalf of the EORTC Quality of Life Group. The EORTC QLQ-C30 scoring manual [Internet]. Brussels: EORTC; 2001 [cited 2018 Apr 12]. Available from: https://www.eortc.be/qol/files/SCManualQLQ-C30.pdf

18. Santana PXS, Borges JN, Barros AMSM. Qualidade de vida do paciente portador de câncer de Próstata em Hormonioterapia. Cad Grad Ciênc Hum Soc Unit [Internet]. 2015 [citado 2018 ago. 15];2(3):111-28. Disponível em: https://periodicos.set.edu.br/index.php/cadernobiologicas/article/viewFile/1856/119

19. Brasil. Ministério da Saúde. Portaria n. 971, de 03 de maio de 2006. Aprova a Política Nacional de Práticas Integrativas e Complementares (PNPIC) no Sistema Único de Saúde [Internet]. Brasília; 2006 [citado 2018 dez. 28] Disponível em: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2006/prt0971_03_05_2006.html

20. Fonseca AA, Souza ACF, Rios BRM, Bauman CD, Piris AP. Perceptions and confrontations of women with breast cancer: from diagnosis to treatment. Rev Enfer Atenção Saúde [Internet]. 2017 [cited 2018 Jun 18];5:S222-9. Available from: https://www.acervosaude.com.br/doc/S-9_2017.pdf

21. Vici P, Pizzuti L, Gamucci T, Sergi D, Conti F, Zampa G, et al. Non-pegylated liposomal doxorubicin-cyclophosphamide in sequential regimens with taxanes as neoadjuvant chemotherapy in breast cancer patients. J Cancer. 2014;5(6):398-405. DOI: 10.7150/jca.9132

22. Wang T, Deng R, Tan JY, Guan FG. Acupoints stimulation for anxiety and depression in cancer patients: a quantitative synthesis of randomized controlled trials. Evid Based Complement Alternat Med. 2016;2016:5645632. DOI: http://dx.doi.org/10.1155/2016/5645632

23. Eghbali M, Yekaninejad MS, Varaei S, Jalalinia SF, Samimi MA, Sa'atchiK. The effect of auricular acupressure on nausea and vomiting caused by chemotherapy among breast cancer patients. Complement Ther Clin Pract. 2016;24:189-94. DOI: 10.1016/j.ctcp.2016.06.006

24. Shin J, Park H. Effects of auricular acupressure on constipation in patients with breast cancer receiving chemotherapy: a randomized control trial. West J Nurs Res. 2018; 40(1):67-83. DOI: 10.1177/0193945916680362

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