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Factors associated with the quality of life in mastectomized patients

Factores asociados a la calidad de vida en pacientes mastectomizadas

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Abstract

Objetives
To determine if the variables: age, marital status, employment status, level of education, socioeconomic status, disease status, commitment to manual dominance, comorbidity and adjuvant therapy, are factors associated with the quality of life in mastectomized patients.
Methods
This research is a cross-sectional Observational type, which assesses the quality of life by applying the SF-36 questionnaire, which included mastectomized women with a diagnosis of breast cancer, unilateral, operated during the period of 2010 - 2014, undergoing modified radical mastectomy according to Madden, who came to control by an external Oncology Gynecology office; who finished adjuvant treatment (chemotherapy and / or radiotherapy), and remain in outpatient control.
Results
The scores of the SF-36 in the dimensions of physical health and mental health were similar for the variables: age (<50 and> 50 years), socioeconomic status and manual commitment. Higher scores were found for patients in married marital status, unemployed employment status, secondary education, absent comorbidity, mixed adjuvant therapy, and in curative disease status, when applying Student's t-test and ANOVA (p <0.05).
Conclusions
The assessment of the quality of life in mastectomized patients is not associated with age, commitment of manual dominance, or socioeconomic status; the best quality of life is associated with the marital status of married, the employment status that is unemployed, secondary education level, absent comorbidity and curative disease status.

Keywords: mastectomy, quality of life, breast neoplasms (font: DeCS BIREME).

Resumen

Objetivos
Determinar si las variables: edad, estado civil, situación laboral, nivel de instrucción, condición socioeconómica, estado de la enfermedad, compromiso de la dominancia manual, comorbilidad y terapia adyuvante, son factores asociados a la calidad de vida en pacientes mastectomizadas.
Métodos
Es un estudio Observacional transversal, que valora la calidad de vida aplicando el cuestionario SF-36, donde se incluyeron mujeres mastectomizadas con diagnóstico de cáncer de mama, unilateral, operadas durante el periodo de 2010 – 2014, sometidas a mastectomía radical modificada tipo Madden, que acudieron a control por consultorio externo de Ginecología Oncológica; que terminaron el tratamiento adyuvante (quimioterapia y/o radioterapia), y permanecen en control ambulatorio
Resultados
Las puntuaciones del SF-36 en las dimensiones de salud física y salud mental fueron semejantes para las variables: edad (< 50 y > 50 años), condición socioeconómica y compromiso manual. Se encontró puntuaciones mayores para pacientes en estado civil casadas, situación laboral desempleada, instrucción secundaria, comorbilidad ausente, terapia adyuvante mixta, y en estado curativo de la enfermedad, al aplicar la prueba t de Student y ANOVA (p<0,05).
Conclusiones
La valoración de la calidad de vida en pacientes mastectomizadas, no se encuentra asociada con la edad, compromiso de la dominancia manual, ni condición socioeconómica; la mejor calidad de vida se asocia con el estado civil casada, la situación laboral desempleada, nivel de instrucción secundaria, comorbilidad ausente y estado de la enfermedad curativo.

Palabras clave: mastectomía, calidad de vida, neoplasias de mama (fuente DeCS).

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Introduction

The breast cancer is the principal cause of death in women between 40 and 55 years. Approximately 195,000 women are diagnosed with breast cancer in the United States each year, and 45,000 women die each year as a result of breast cancer (1). The probability of developing breast cancer increases with the age, and incidence rates show increases among women over 50 years of age compared to younger women (2).

The localized disease reaches 61% of all breast cancers diagnosed in the United States, with a 5-year survival rate of 98% (3).

The quality of life (QL) is a multidimensional, abstract concept, mainly subjective and closely linked to the culture, in which QL is considered from the perspective of the health state (4), as the subjective evaluation of life understood as a everything, or the assessment of the patients on the satisfaction with their level of normal functioning compared to what they thought was ideal (5).

The SF-36 (Short-form Healthy Survey) It is a generic questionnaire consisting of 36 items that are grouped into 8 dimensions that provide information related to Physical Function (PF), Physical Role (PR), Body Pain (BP), General Health (GH), Vitality (VT), Social function (SF), Emotional role (ER), Mental health (MH) (6). In the present study the Spanish version was used, properly translated and validated with the name of Health Questionnaire SF-36 (7).

In our context, there are an increasing number of breast cancer survivors and there are not many studies that evaluate the factors that influence the QL of mastectomized patients. The purpose of this research was to assess if the following variables: age, marital status, employment status, level of education, socioeconomic status, disease status, commitment to manual dominance, comorbidity and adjuvant therapy, are factors associated with the quality of life in mastectomized patients.

Methods

This research was carried out in the Gynecology Oncology and Breast Pathology Unit of the Gynecology Service of the Carlos Alberto Seguín Escobedo National Hospital (CASENH) of the Arequipa Healthcare Network, Essalud (Social Health Insurance, Peru). Were studied the women patients who were mastectomized with diagnostic of breast cancer, to was operated during the 2010-2014 period, who reach the criteria for inclusion of unilateral breast cancer, underwent modified Madden type radical mastectomy in the CASENH, who went to control through an outpatient clinic of Gynecology, who finished adjuvant treatment (chemotherapy and radiotherapy), and remained in outpatient control. Patients who did not accept to undergo the study, who presented auditory or cognitive compromise that did not allow answering the questionnaire, brain, liver or lung metastases were excluded.

The patients who reach the inclusion and exclusion criteria, who accept to participate in the study, were subjected to an interview at one time by the researcher for approximately 20 minutes, in the Oncology Gynecology office. The sample size for convenience included 100 patients. Three instruments for data collection were applied: Personal Background Record, OIT Socioeconomic Level Index, and SF 36 Health Questionnaire (8).

The SF-36 questionnaire includes summary scores of the Physical Health component on the one hand and Mental Health on the other (7.8). The items are coded giving scores between 0 (the worst state of health for that item) and 100 (the best state of health for that item) according to response levels (9). The items of the PF, PR, BP and GH domains were averaged, resulting in the physical component score, and the average of the VT, SF, RS and GH domains as the score of the Mental Health component (10).

The independent variables included were: age, marital status, employment status, level of education, socioeconomic status, stage of the disease, commitment to manual dominance, comorbidity and adjuvant therapy, and the dependent variables were Physical Health and Mental Health.

The descriptive statistical analysis of the categorical variables is presented by absolute frequencies and of the continuous variables through of their corresponding means and standard deviations. The scores of the 2 dimensions of Physical Health and Mental Health were determined, according to the SF-36 scale for each independent variable and the averages were compared with each other by the bilateral Student´s T - Test to compare 2 categories, and the test of ANOVA when 3 categories were analyzed, considering a level of significance <0.05.

Results

Table 1: Values of the Physical Health and Mental Health dimensions according to age, marital status, employment status

Variables	Physical Health				Mental Health		
	N	Average	SD	p	Average	SD	p
< 50 years	20	61,28	21,73	0,29*	55,00	12,77	0,07*
>= 50 years	80	66,80	21,01		63,21	19,41	
Single	20	56,80	18,42	0,001**	52,85	10,68	0,001**
Married	56	74,86	15,06		70,53	14,19	
Separated	24	51,76	25,89		47,91	21,85	
Employed	52	61,34	22,10	0,03*	59,12	17,50	0,002*
Unemployed	48	70,42	19,12		69,64	16,25	

* Student´s T - Test
** ANOVA

Table 2: Values of the Physical Health and Mental Health dimensions according to level of Instruction, disease status, commitment to manual dominance

Variables	Physical Health				Mental Health		
	N	Average	SD	p	Average	SD	p
Primary	12	71,30	28,25	0,001**	66,67	17,15	0,001**
Secondary	24	81,11	09,25		75,89	17,26	
Higher Education	64	58,87	20,18		55,24	16,45	
Curative	80	70,58	18,07	0,001*	65,00	18,08	0,005*
Paliative	20	46,18	21,28		52,14	18,14	
Homolateral	56	68,43	22,26	0,14*	66,19	18,96	0,07*
Contralateral	44	62,22	19,28		59,68	16,51	

* Student´s T - Test
** ANOVA

Table 3: Values of the Physical Health and Mental Health dimensions according to comorbidity, adjuvant therapy, and socioeconomic status

Variables	Physical Health				Mental Health		
	N	Average	SD	p	Average	SD	p
Present	52	58,75	24,43	0,001*	55,76	20,57	0,001*
Absent	48	73,23	13,22		67,85	13,81	
Chemotherapy (CT)	32	58,65	27,82	0,02*	55,13	22,61	0,02*
CT + Radiotherapy	68	69,01	16,57		64,60	15,84	
Low	16	61,75	18,19	0,35**	52,23	11,87	0,08**
Medium	52	68,59	23,63		63,59	21,62	
High	32	62,97	18,79		62,94	15,29	

* Student´s T - Test
** ANOVA

Discussion

In this research, the SF 36 questionnaire was applied to 100 patients, through a direct interview, in an external Oncology Gynecology office of CASENH, the quality of life assessment in the dimensions of Physical Health (PH) and Mental Health (MH), It shows in Table 1 that according to age it is the same in both younger and older patients to 50 years of age (Student´s T - Test p> 0.05), which differs from what is reported in the literature by Engel (11) who described a better quality of life in young patients and by Recalde (12) who found a higher significantly score in women to 50 years and more, these results could be explained because the time elapsed since diagnosis and treatment in our patients was 2 to 8 years, being higher than to the previous studies, and we believe that it is this longer time that allows a better biological adaptation to the corresponding oncological therapies, and also as time passes, internal adjustments are presented that preserve the person's satisfaction with life, regardless of age.

According to the marital status we see in Table 1, with respect to the QL reports a higher score for PH and MH for married women in relation to single and separated women, these differences being statistically significant, this

does not coincide with what was described by Palacios (13) who found no association between the quality of life for married or life partners patients who had a PH score of 74 and MH of 77, in relation to the single women (single, widowed, divorced) who reached a score of 72 for both dimensions In our case, it could be the sustained family support responsible for the good quality of life of married patients; This could be based on the fact that it is the spouse's support that allows women to overcome and live with breast cancer, to better adapt to its sequelae. Kaminska (14) determined that social factors (age, education, marital status) influenced the evaluation of quality of life, with the level of anxiety and depression being higher in women who underwent a mastectomy.

Regarding the employment situation, we observe in Table 1 that the average of PH and MH is higher in unemployed than in those employed, this fact contradicts that what was reported by Engel (11), who found that the patients with employment showed the highest averages in both measures summarized; meanwhile the unemployed and with a medical license, respectively, present the lowest values of the mental component and the physical component; similarly, Reich (15) also described a significant difference in the QL in relation to the employment situation, with a higher score in the employed patients; It should also take into account the possibility that the most active patients could be those patients with less biologically aggressive disease, who have a greater capacity for adaptation and psychological status, so they remain active laboriously; but in our case it could be sustained that unemployed women would have less obligations and no job stress.

According to the level of Instruction we found in the Table 2 that there are statistically significant differences in the quality of life scores, the average being higher in women with secondary education, that which differs from what is reported in the literature by Palacios (13), who reported that women without instruction, with complete and incomplete primary, had a better SF score compared to those with secondary or higher education; and Reich (15) described a significant statistical association between a higher QL score in direct relation to the level of studies achieved; In our study it could be explained because all these insured patients belong to the Arequipa Healthcare Network and have the same opportunity for timely access to specialized health services, to receive the appropriate treatment, which in another space would be different because it would be limited by economic capacity .

According to the disease status, we found in the Table 2 that there is a statistically significant difference in PH and MH between mastectomized patients in a curative state in relation to women with palliative status; in other words, the QL is better in patients who manage to control their disease after specialized treatment, who are integrated into their usual activities, while patients in palliative state due to bone or skin metastases, have limitations due to symptoms added to the recurrence of the disease, mainly neuropathic pain, with a greater tendency to depression. These patients in palliative state, have active disease, bone metastases and skin metastases, that although they have a good prognosis and respond to treatment with radiotherapy and do not compromise the total survival, reduce the individual perception of quality of life; these findings are consistent with the data reported by Recalde (12) who studied the quality of life in 125 women with breast cancer, finding a significant statistical difference in the QL, 44% of women had a very good quality of life in the group with status curative, while in the palliative group only 16% showed very good quality of life.

In relation to the commitment to manual dominance, we found in the Table 2 that the PH and MH scores are similar for both the homolateral and contralateral involvement, the differences are not statistically significant, we observe that 56 patients who were mastectomized to the homolateral side to their most skilled upper limb, whether right or left, while 44 patients they had surgery on the contralateral side of their most skilled upper limb, there were only 3 cases of lymphedema, 2 homolateral and 1 contralateral; These data are not comparable to those reported in the literature, where the cases of lymphedema are significantly greater.

Vacek (16), found that the patients who did perceive an increase in volume in the upper limb homolateral to surgery, presented a lower quality of life, they observed that patients with lymphedema had lower scores about the domain of body pain and emotional role. Taghian (17) reported that secondary lymphedema remains a major quality of life problem, with known consequences related to

physical, psychological and emotional adecuate status. The data found in our research could be explained because all the patients under study had more 2 years after the mastectomy, and therefore they have benefited from the passage of time that has allowed them a better motor adaptation, and above all we think that the quality was not affected because there were very few cases of lymphedema in the upper limb Homolateral to mastectomy.

Based on the presence of comorbidity, we found in the Table 3 that patients with diabetes mellitus and / or arterial hypertension, had a lower QL score in relation to women without comorbidities, exist a difference that was statistically significant, and does not match what was described by Palacios (13), who found a QL score of 78 and 76 for PH and MH in the group with present morbidity, while for the group with absent morbidity the score was 73 and 70, those differences were not statistically significant (p = 0.16). These findings could be explained in our research, because these chronic diseases decrease the ability to adapt when faced with breast cancer treatment. Storey (18) found that women with breast cancer and diabetes who had between three and eight years after diagnosis had worse physical function, more sleep disorders and greater fatigue than women with breast cancer without diabetes; Connor (19) reported that obesity at baseline and during follow-up was significantly associated with a decrease in PH and MH among breast cancer survivors.

According to the type of adjuvant therapy, we observe in Table 3 that the quality of life scores were lower among patients undergoing chemotherapy (CT) alone than in those who received chemotherapy and radiotherapy (CT / RT), these results do not coincide with as described by Palacios (13), who found an average score of 70 and 71 in the dimensions of PH and MH for the chemotherapy group while for the CT / RT group the scores were 75 and 77, with no statistically significant difference. Schou (20) reported worse QL in women 1 year after CT. Previous researches have shown that chemotherapy significantly worsens the quality of life in patients with breast cancer (21,22). Khater (22) reported that the quality of life score of Egyptian women was lower when they received chemotherapy and radiotherapy.

Based on the socioeconomic status, we found in the Table 3 that the quality of life does not show a significant statistical difference between the strata of low, medium and high condition. These data correspond to the described by Recalde (12), in Asunción, Paraguay, who did not find sufficient evidence to confirm that the quality of life is associated with the socioeconomic status, perhaps, among other reasons, because the questionnaire used to assess quality of life did not delve into financial aspects of the patients, 54.4% of all patients responded that they had no economic problems associated with the disorder, because the treatment was completely covered by social security. In the social dimension of the quality of life, a very important factor are these financial difficulties of the patients to face the cost of the treatment when they do not have insurance for health care, but we must consider that all these patients belong to the Arequipa Healthcare Network of Essalud, are insured and have the same possibilities of specialized care and treatment without any discrimination, which is different in uninsured patients who do not have the same opportunity to access specialized health services. Sleight (24) found a lower QL in all the aspects related to the patients with lower incomes, which were associated with care and support needs.

We must recognize that in this research there was a selection bias because the quality of life questionnaire was applied to patients who was survivors to the breast cancer, the same ones that were taken care of in the outpatient office of the Oncological Gynecology Unit, the majority of these patients being that they are in complete remission (80%), and therefore in a better state of health than those that receive home care, for presenting restrictions for their physical activity; In addition, utility scores on QL deteriorate with the severity of breast malignancies (25).

Finally, we can mention that there is no association between the QL of mastectomized patients with the variables minor age than or greater than 50 years, commitment to manual dominance, or socioeconomic status; the best quality of life was associated with married marital status, the status unemployed employment status, instruction degree of secondary education level, the absent of comorbidity and the disease status in curative period. These results could be based on the nature of breast cancer, which is a disease with a strong background genetic component,

independent of these social factors; therefore, it affects all social strata equally.

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