

Age related Quality of life among selected breast cancer patients in Aden, Yemen

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Abstract

Background: Evaluation of the quality of life (QOL) among breast cancer patients, after their exposure to the disease stress and therapeutic traumas is not performed in Aden.

Patients and Methods: This was a cross-sectional study conducted to assess the QOL of Yemeni patients with early stage breast cancer in Aden by using the Functional Assessment of Cancer Treatment-Breast (FACT-B) scoring system version 4. The study enrolled 58 female patients who attended for follow-up investigations in the Central Public Health Laboratories – Aden branch, for the period from July to Sep. 2010.

Results: The overall QOL score ranges from 40 to 134, with a mean of 77.6 (median 74). The mean score for various subscales were: physical well being (GP) (21.3±3.2), social/family well-being (GS) (17.2±6.3), emotional well-being (GE) (18.2±2.1), functional wellbeing (GF) (7.8±2.7). The mean scores for breast cancer specific subscale (B) was 21.2 ± 5.4. Younger patients were having worse QOL in breast cancer specific concerns, except in B4 item (related to sexuality) when compared to older patients.

Conclusion: This study concluded that Yemeni patients with early breast cancer are having lower QOL after treatment, this QOL was deteriorated among younger patients when compared to older patients.

Introduction

Breast cancer is the commonest malignancy in women, comprises 18% of all female cancers.¹ Treatments for breast cancer challenge a woman's body image and sexuality. The systemic treatment of breast cancer with chemotherapy or hormonal therapy may also affect self-image, fertility, and libido, all important components of 'femininity'.²

The combined effects of breast surgery, loss of hair, decreased libido, and early menopause constitute a serious threat to a woman's self-image.^{3,4} In addition, as the rate of breast cancer has increased in younger women, issues of femininity arising from the impact of disease on fertility are increasingly important.^{2,5}

The quality of life (QOL) can be defined as self-perceived aspects of wellbeing that are related to or affected by the presence of a disease or treatment.⁶ It is

an individual imaginations or thoughts from life style according to his/her objectives, expectations, standards and preferences. It includes perceptions of both positive and negative aspects of dimensions such as physical, emotional, social and cognitive functions, as well as the negative aspects of somatic discomfort and other symptoms produced by a disease or its treatment.⁷

Measuring the QOL in breast cancer patients has been the focus of clinical practice and research in recent decades and is of importance in assessing treatment outcomes.^{8,9} However, in Aden, as in most Arab cities, there is no significant concern for the evaluation of QOL among oncology patients who were exposed to stresses from the disease, the surgery and the treatment of such cancers. The only available study for QOL in Yemeni patients was conducted during (2008 - 2011) for breast cancer patients by Al-Naggar et al,¹⁰ who revealed that family monthly income, body mass index, educational status, years after diagnosis, histological grade radiotherapy and surgery were significantly influence the QOL of breast cancer patients in Yemen. Al-Naggar et al,¹⁰ studied their patients in Sana'a at the National Oncology Center, where all facilities are available and provided to patients free of cost.

In Aden, where a small oncology unit is available, providing only chemotherapy care, which is partially on the expense of patients, the figure may be more exaggerated. It was decided to conduct this study to have an idea about the QOL of breast cancer patients in Aden; does these patients cope well or not with their new life?

Objective: To determine the QOL of Yemeni patients in Aden after treatment of early stage breast cancer below 50 years compared to 50 years and more of age.

Patients and methods

Design

This is a cross sectional study, included 58 women diagnosed with stage I and II breast cancer who were proved to be free of recurrence (by CT scan or MRI) during follow-up for the last 2 years after they finished chemotherapy and/or radiotherapy. They were interviewed in the Central Health Laboratories in Aden during their routine attendance for investigations and selected after the evidence of disease free recurrence during July – September, 2010.

Assessment of QOL

This study used the Functional Assessment of Cancer Treatment-Breast (FACT-B) version 4,¹¹ which consists of 36 items for evaluating functional impairment and the perceived effect of that impairment on QOL.

The FACT-B is comprised of five areas of QOL: physical well being (GP), social/family well-being (GS), emotional well-being (GE), and functional well-being (GF), in addition to nine items specifically related to breast cancer. The nine breast cancer - specific items include questions related to appearance, sexuality, treatment side effects, and stress/illness.

It was selected because of its simplicity as well as it displays good reliability, validity and sensitivity to change.^{11,12} A written transcript of each interview was prepared in Arabic language to facilitate the understanding of each variable.

These items are summed to provide a global measure of QOL. Participants endorsed the degree to which each item had been true for them during the past 7 days, using a 5-point Likert-type scale (ranging from 0 = not at all to 4 = very much). The total QOL score was used, with higher scores indicating better QOL.

Trial outcome index (TOI)

It was calculated from the total of GP, GF and Breast specific subscale (B). It can be used in analyses as a summary measure of GP and GF in breast cancer patients.

Data analysis

Data were processed by the SPSS 18; at first, the internal consistency was determined by the Cronbach's alpha ($\alpha = 0.80$). Then the all items of the FACT-B were calculated as mean values and standard deviations.

All patients and relatives were informed before data collection about the objective of the study and verbal consent were obtained directly from them.

Results

All the studied breast cancer patients were females, with a mean age of 43.8 \pm 10.5 years. The overall QOL score ranges from 40 to 134, with a mean of 77.6 (\pm 12.1) (median 74).

The mean score for various subscales were: physical well-being (GP) 21.3 \pm 3.2; social/family well-being (GS) 17.2 \pm 6.3; emotional well-being (GE) 18.2 \pm 2.1 and functional well-being (GF) 7.8 \pm 2.7. The mean scores for breast subscale (B) was 21.2 \pm 5.4 (median 28, range 18–40). [Table 1]

The results of t-test demonstrated strong age effects on QOL. Younger women (< 50 years) showed significantly lower QOL scores than older women (\geq 50 years) in all of the QOL subscales [Table 2]. Subscales that showed significant relationship to age were GE and GF as well as the total FACT-B score. [Table 2] The mean scores of the respective FACT-BCS item between the two age groups were compared in table 3. Younger women showed significantly worse scores in B1 ($p < 0.001$) and B6 ($p < 0.05$) than older women. The findings of table 3 considers younger patients group more likely to have worse QOL in breast cancer specific concerns, except in B4 item (related to sexuality) than older patients.

Discussion

In Aden, comprehensive cancer care is provided in a small oncology unit supported by small qualified team with increasing patients load. There is no place or time or even specialist taking care of the psychosocial needs of cancer patients in Aden.

According to Al-Kahiry W et al,¹³ 67% of breast cancer patients in Aden present in advanced stages and 33% in early operable stages. It is possible that late stage cancer is associated with low QOL, i.e. why this study was conducted among women with early stage breast cancer (I and II), where they usually experience feelings of anxiety, depression, difficulty sleeping, hopelessness, and loss of control.

Breast cancer patients were selected in this study due to its high incidence and survival, as well as breast cancer is one of the oncologic diseases in which health-related QOL has been most studied.¹²

The mean age of the studied women with breast cancer was 43.8 years. It is not far from that reported by the study of Pandey M et al in India,¹⁴ (45.6 years); Alawadi and Ohaeri in Kuwait,¹⁵ (48.3 years); as well as that of Avis NE et al in USA,¹⁶ (41.67 years).

The overall QOL reported in this study among breast cancer Yemeni patients in Aden was 77.6 and the breast cancer-specific subscale (BCS) was 21.2. These are lower than that reported by previous studies.

In India, Pandey M et al,¹⁴ reported an overall QOL as 90.6 and BCS as 23.8 after breast cancer curative intent. In China, Mak SS et al,¹⁷ reported an overall QOL of 102.9 and BCS as 22.7. In Korea, Park BW et al,¹⁸ reported an overall QOL of 95.53 and BCS of 22.76. In Chicago, Brady MJ et al,¹⁹ reported an overall QOL of 111.8 and BCS of 24.6. In California, the Pathways Study,²⁰ reported an overall QOL of 110.8 and BCS of 25.36. All these findings support the fact that Yemeni patients after early breast cancer treatment, had lower QOL.

It may be attributed to aggressive responses of Yemeni females after the experience of breast cancer, which creates challenges for a marriage or significant relationship and difficulty in coping with daily social life.

Oncology patients in Aden are not receiving any psychological remedy, even those with early stages of cancers, who are at greater chance of survival. Because of the lower education among most Yemenis, mainly women, still cancer at any stage means the termination of life, and this is also one of the factors that may lowers QOL among the studied patients in Aden.

A patient's phase of life has a significant impact on adjustment: younger patients demonstrate greater levels of distress than older patients.^{3,4} In breast cancer patients, advanced age has been associated with increased social activities and contacts, with better mental health, perceived quality of life, and functioning.⁵

The current study demonstrated similar pattern of age relationship to the QOL after treatment of early stages breast cancer patients. Table 2 and 3 in the current study demonstrated that older age Yemeni women in Aden were having better QOL than younger age Yemeni patients. This is in agreement with that observed by Pandey M et al (2005),¹⁴ who reported the mean physical well-being to decrease significantly in women under 40 years of age, and women between 40–

50 years of age, but not in women above 50 years. As well as the study of Avis NE et al (2005),¹⁶ which supported that younger breast cancer survivors are at risk for impaired QOL up to several years after diagnosis and the study of Kwan ML et al (2010),²⁰ which found that younger age at diagnosis was associated with lower scores in all QOL domains ($p < 0.01$).

Our finding is against that reported by Park BW et al (2011),¹⁸ in Korea, and Ohsumi S et al (2009),²¹ in Japan. These differences may be due to the symptom/psychological distress caused by disease process or could be directly related to women's inability to cope with the treatment process. Social and family support and communication have been found to be important factors in various studies,²² and may also be partially responsible for better QOL in older age Yemeni women.

Conclusion and recommendation

This study concluded that Yemeni patients with breast cancer have deteriorated QOL after treatment, this deterioration is marked among younger patients when compared to older patients. This study recommended that:

1. Evaluation of the post-treatment QOL of cancer patients should be a part of the evaluation criteria of cancer therapy in Aden.
2. There is an urgent need for a national health education about psychosocial prognosis in cancer.
3. Clinicians treating Yemeni women with breast cancer should prepare them for the post therapeutic adjustment, reassuring that it is easy to return to usual life style before the cancer.

Tables

Table 1. Mean and median values of quality of life scale, subscale scores and patients' age

Variable	Range	Mean ± SD	Median	
Age of patients (years)	28 – 70	43.8 ± 10.5	46	
General Physical well-being	GP*	14 – 28	21.3 ± 3.2	20
General Social/family well-being	GS*	5 – 27	17.2 ± 6.3	21
General Emotional well-being	GE*	12 – 24	18.2 ± 2.1	18
General Functional well-being	GF*	2 – 28	7.8 ± 2.7	10
Breast specific subscale	B*	18 – 40	21.2 ± 5.4	28
Total FACT-B score		40 – 134	77.6 ± 12.1	74
Trial outcome index	TOI	34 – 81	56.1 ± 13.3	66

FACT-B: functional assessment of cancer treatment-breast, SD: standard deviations.

*Abbreviations of the standard FACT-B questionnaire. Higher mean scores reflect better QOL.

Trial outcome index (TOI) = GP + GF + B.

Table 2. Quality of life scale, subscale scores related to age group of patients

Variable		Age group (years)		(t-test) p-value	
		< 50 (n=27)	≥ 50 (n=31)		
General Physical well-being	GP*	20.6 ± 4.7	22.9 ± 5.2	0.082	NS
General Social/family well-being	GS*	17.4 ± 6.6	18.8 ± 5.2	0.378	NS
General Emotional well-being	GE*	16.3 ± 4.0	19.5 ± 3.3	0.002	S
General Functional well-being	GF*	6.3 ± 2.1	8.2 ± 2.4	0.002	S
Breast specific subscale	B*	20.7 ± 5.5	22.1 ± 4.8	0.310	NS
Total FACT-B score		74.2 ± 13.1	84.6 ± 14.4	0.006	S

FACT-B: functional assessment of cancer treatment-breast. Values are means and standard deviations.

*Abbreviations of the standard FACT-B questionnaire. NS: non-significant.

S: significant

Table 3. Comparison of mean scores of FACT-BCS items between the two age groups

Breast cancer specific items*	Age group (years)		(t-test) p-value	
	< 50 (n=27)	≥ 50 (n=31)		
B1: I have been short of breath	3.2 ± 0.6	3.9 ± 0.8	0.001	S
B2: I am self-conscious about the way I dress	2.3 ± 1.1	2.4 ± 1.1	0.731	NS
B3: One or both of my arms are swollen or tender	3.1 ± 1.0	3.3 ± 1.1	0.474	NS
B4: I feel sexually attractive	1.7 ± 1.2	1.4 ± 1.1	0.325	NS
B5: I am bothered by hair loss	3.2 ± 1.1	3.5 ± 1.4	0.373	NS
B6: I worry that other members of my family might someday get the same illness I have	1.7 ± 1.2	2.4 ± 1.0	0.019	S
B7: I worry about the effect of stress on my illness	1.7 ± 1.0	1.9 ± 1.3	0.519	NS
B8: I am bothered by a change in weight	2.7 ± 1.1	2.8 ± 1.2	0.743	NS
B9: I am able to feel like a woman	2.4 ± 1.3	2.7 ± 1.1	0.345	NS

FACT-BCS: functional assessment of cancer treatment-breast cancer specific items.

Values are means and standard deviations

*Abbreviations of the standard FACT-B questionnaire. NS: non-significant

S: significant

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