Depression and Health Related Quality of Life in Breast Cancer Patients

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Abstract: Breast cancer considers the most important and prevalent cancer among women worldwide. The disease itself may have impact on the patients' psychological well-being and quality of life. The aim of present study was to investigate depression prevalence in relation to health related quality of life (HRQOL) in women with breast cancer. Samples were composed of 60 women at the mean age of 43.8 years in IMKH Hospital in Iran 2009. For purposes of assessing HRQOL, applied the Functional assessment of chronic illness (FACT) and brief instrument for detecting expressive symptoms and Beck Depression Inventory (BDI). General linear modelregression was performed to analysis of data. Results revealed that: More than half of patients reported depression and all domains of HRQOF were affected by depression. Significance differences were found between depression and treatment type. More participants in the chemotherapy group, suffered from depression than in theradiotherapy group. Participants with depression were significantly related with poorer overall HRQOL and four subscale of HRQOL. Statistically significant effects of depression were reported in overall HRQOL. Participants with depression were more likely to have poorer overall HRQOL, except SFWB. In conclusion: Although further studies are necessary to confirm our findings, the results emphasize the necessity forhealth strategies in breast cancer patients.

Key words: Breast cancer · Depression · Quality of Life.

INTRODUCTION

Many times depression is under diagnosed in patients with cancer and consequently under treated. One of the most important reasons is that depressive symptoms (sadness, fatigue and weight alteration) are often considered as normal and expected as a result of treatment. One out of two cancer patients report psychiatric disorders, especially depression [1-3]. Various risk factors for depression have been identified in the literature on post and pre- treatment of breast cancer. Depression has been related to demographic characteristics (age, [4] educational status, [5]), treatment type [6]. Furthermore, exist of depression has a negative impact on HRQOL that interferes with the patient's ability to cope as well as with evolution of the disease [7]. The

importance of diagnosing and treating depression has been recognized for its impact in improving QOL [8]. HRQOL is a significant area of concern in the treatment of patients with cancer [9]. Various literatures exist on HRQOL in cancer patients and it is commonly recognized that HRQOL is an important key in cancer patients [10].

Prevalence of depression in various studies is different in different population, some studies reported about20% to suffer from depression [3-11,12]. And two recent empirical reviews on the prevalence ofdepression indicated that its occurrence rate in cancer patients ranges from 10% to 25% or more, which is considerably greater than in the general population [13,14]. These unrelieved symptoms can have significantly negative effects on self-functional or HRQOL in these patients. Thus researchers expect that concurrent examination of risk factors for

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HRQOL will be helpful in directing intervention efforts in a clinical oncology setting. Previous evidence have provided information on the potential of depression [11- 14, 16]. Results have often been controversial, particularly in regard to cancer type or questionnaire. Furthermore, seems previous studies none have simultaneously evaluated the prevalence and correlates of depression or relevance to HRQOL in breast cancer in Iran. Based on the above findings, the specific aims of this study were to examine correlates ofdepression in relation with HRQOL among women diagnosed with breath cancer.

METHODS

Design: This study used a cross-sectional descriptive design.

Sample: Sixty subjects were selected from the outpatient sections of the Clinical Oncology of the local public hospitals in 2009. All patients agreed for participation and signed a consent form approved by the Research Ethics Committee of Medicine University. Eligibility criteria included: Iranian women aged 18 years old or older and were in midway their course of curative treatment bychemotherapy or radiotherapy.

Exclusion Criteria Conclude: 1) had difficulty in understanding the questionnaire.2) history of psychiatric problems.3) who is conflict other chronic disease such as migraine, diabetes and.

Tools: The demographic data consisted of age, income, marital status, educational level, employment status, family history of cancer, stage of disease, co- morbidity and duration of illness, type of current treatment, time since initial treatment and type of surgery received.

HRQOL: The Functional Assessment of Cancer Therapy for Breast Cancer (FACT-B)-Iranian versionwas used to assess the degree of the participants' QOL (FACIT Functional Assessment of ChronicIllness. The scale include of 36 items divided into five subscales: the physical, emotional, social, well-being and breast cancer subscales. Each item was rated on a five-point scale (0 = not at all;1 = a little bit; 2 = somewhat; 3 = quite a bit; 4 = very much). Higher scores reflect better functional status. Internal consistency and content

validity were examined in a sample of 60 Iranian patients with breast cancer [17]. Beck Depression Inventory (BDI). The BDI, which was originally designed tomeasure the depression in psychological patients, consider 21 symptoms of depression. Each questionis rated on a four-point intensity scale and scores are in total ranging from 0 to 63. Higher scores showed more severe depression. The following cut off scores were used for the BDI, no or minimal depression, <10; mild-to-moderate depression, 10-18, moderate-to-severe depression, 19-29 and severe depression, 30-63. The Iranian version of the BDI has been validated [18]. Psychologist explained the questionnaires and aim of study to patients then data were collected by self-report questionnaires.

Analysis: Each independent fact found to be statistically significant (p<0.05). A general linear model (GLM)was used to explore whether the degree of HRQOL showed considerable difference with differentdepression or not. We used the Statistical Package for Social Science (SPSS version 14.0) to analyze the data.

RESULTS

Descriptive analyses of patients are indicative to the total sample, education levels Table 1. The demographic variables, more than half did not have mastectomy. Depressive symptoms (mild to severe) found in 50% (n=30).

Depression Prevalence: The percentage of patients suffering from depression and compared with the type of current treatment showed in (Table 2). Significance differences were found between depression and treatment ($x2 = 8.01$, $p = 0.006$). More participants in the chemotherapy group, were suffered from depression than in the radiotherapy group.

Depression with HRQOL: Statistically significant impacts of depression were reported in all variables. Participants with depression were significantly related with poorer overall HRQOL ($\beta = -17.77$, $p < 0.001$) and four subscale of HRQOL ($p \leq 0.001$). Statistically significant effects of depression were reported in overall HRQOL ($\beta = -14.22$, $p < 0.001$), PWB ($p = 0.013$), EWB ($p < 0.001$), FWB ($p = 0.029$) and BCS ($p < 0.001$). Participants with depression were more likely to have poorer overall HRQOL, except SFWB Table 3.

Table 1: Clinical and demographic sample data (n=60)

Variables	Scores
Age mean (SD)	43.81±47.12
Education	(%)
Elementary	60.2
High school and higher	39.8
Diseaseduration(year) mean (SD)	3.64±3.98
Mastectomy	(%)
Yes	(49.4)
No	(50.6)

Table 2: A comparison depression grouped by types of cancer treatment

		All subjects	Chemotherapy	Radiotherapy	x^2	P-Value
		(%)	(%)	(%)		
Depression	Y	(39.9)	(39.5)	(23.9)	8.02	0.006
	N	(60.1)	(60.5)	(76.1)		

Table 3: Depression estimated of the overall and five domains of HRQOL using GLM test.

QOL	Beta	SE	T	p-Value	95%CI
Overall QOL	-13.219	2.999	-4.407	0.001	-19.131,-7.306
Physical well-being	-2.863	1.188	-2.410	0.013	-5.206,-0.521
Social/family well-being	0.923	0.995	0.928	0.354	1.038, 2.885
Emotional well-being	-5.523	0.788	-7.008	0.001	-7.076,-3.969
Functional well-being	-2.058	1.014	-2.030	0.029	-4.057, 0.059

DISCUSSION

Authors explored the prevalence and correlate of depression and found out relation to HRQOL in breast cancer. The prevalence of depression was somewhat higher than reported in previous studies of breast cancer patients [13,14]. In Explain of this contradiction, there was some difference in our study in comparison of mentioned studies. Women in the present study (mean age, 43 years) were younger than previous studies patients, which could explain for differences; younger patients have been shownto report more depression than older patients [19]. A significant relation was between the groups in their overall and four domain results on the FACT, except social familywellbeing. Participants with depression experienced a poorer HRQOL and provided evidence that depression could have effects on the physic-psycho-social health of patients in cancer treatment term.

CONCLUSION

The results of this study demonstrated depression have a significant effect on the HRQOL of the participants. Additionally, psychological symptoms may decrease the efficacy of treatment in cases of breast cancer [20]. Although the mechanism of how psychological distress changes the efficacy of the treatment is poorly understood, evidence suggested that psychological distress may cause stress which alters hormonal and neuronal secretions and affects the biological activity of breast cancer cells [21]. Therefore, the early studies of psychological symptoms and provision of effective symptom management may well maintain the effectiveness of the cancer treatment. Finally care dealing with the importance of depression assessment into their palliative care should be therefore increased and their clinical attentions in diagnosing high-risk groups of patients undergoing cancer treatments have to increase.

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The authors declare that they have no competing interests.

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