Impact of Chemotherapy upon Lifestyle for the Patient with Bladder Cancer

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الخلاصـــة:

الهـــدف: تهدف الدراسة إلى تحديد أثر العلاج الكيماوي على نمط حياة مرضى سرطان المثانة الذين يتعاطون العلاج الكيماوي.

المنهجيّـــة: أجريت دراسة وصفيّة في مستشفى الجراحات التخصصيّة التعليمي، مستشفى اليرموك التعليمي ومستشفى الإشعاع والطب النووي في بغداد للفترة من أيار (مايس) ٢٠٠٧ إلى تشرين الثاني ٢٠٠٨. شملت عينة البحث (١٠٠) مريضاً مصابين بسرطان المثانة من الذين يتعاطون العلاج الكيماوي واختيرت بطريقة غرضية (غير احتمالية). صُمِّمَت استمارة استبانه لغرض الدراسة تضمّنت جزئين (المعلومات الديموغرافية، أبعاد نمط الحياة). حدّد صدق الأداة من خلال عرضها على (١٣) خبير من ذوي الاختصاص. جُمِعَت المعلومات بواسطة الباحث من خلال استمارة الاستبانة وبطريقة المقابلة. حللت البيانات باستعمال أسلوب الإحصاء الوصفي (التكرار، النسبة المئوية والوسط الحسابي الموزون) والأسلوب الإحصائي الاستنتاجي (مربع كاي، الإنحراف المعياري ومعامل الارتباط).

النتائـــج: أظهرت نتائج الدراسة أنّ مُعدّل عمر معظم مرضى العينة (٦٠,٣) وأغلبهم من الذكور الساكنين في المناطق الحضرية ومتزوجين ولديهم أولاد ومن خريجي الدراسة الإبتدائية ومن أصحاب المهن الحرة ودخلهم الشهري يكفي نوعا ما وأنّ أغلبهم يتعاطون العلاج الكيماوي بواسطة الأنبوب المثاني وأنّ مُدّة الإصابة بالمرض من (١-٥) سنوات.

التوصيات: أوصت الدراسة بإقامة البرامج التعليمية التطويرية والتطبيقية لمرضى سرطان المثانة الذين هم تحت العلاج الكيماوي.

Abstract

Objectives: The study aimed to determine the effect of chemotherapy on the life style of patients who receive chemotherapy.

Methodology: A descriptive study was conducted in Specialty Surgery Teaching Hospital, Al-yarmok Teaching Hospital, and Radiation and Nuclear Medicine Hospital in Baghdad for the period from May 2007 to October 2008. A purposive "non- probability" sample of (100) patients with bladder cancer who receive chemotherapy where concerned in this study.

A questionnaire form was constructed for the purpose of the study and it was comprised of two parts. The questionnaire consists of (125) items. They include (1) demographic information (2) assessment of lifestyle dimension. The content validity of the questionnaire was determined through a panel of (13) experts. Data were collected by the investigator who interviewed those patients and filled out the constructed questionnaire form.

The data were analyzed by using descriptive statistical approach (frequency, percentage and mean of scores) and inferential statistical approach (chi-square, standard deviation and correlation coefficient).

Results: The findings of the study have revealed that most of patients with bladder cancer who receive chemotherapy were of 60.3) years mean age, mostly males, living in urban area, married and had children, primary school graduate, retired with barely sufficient monthly income taking chemotherapy by Foley's catheter and duration of disease 1-5 years.

Recommendations: The study recommended that an education program to be developed and implemented of patients with bladder cancer who were under chemotherapy treatment.

Key words: Life-style of Bladder Cancer Patients who Receiving Chemotherapy

Introduction:

Bladder cancer is primarily a disease that affecting people in advanced age. Currently, the average age at diagnosis in United States is 68 years [1].

The male–female ratio for bladder carcinoma is 2.7:1 (7% of new cancer cases occur in men and 3% in women) and the disease is more common in whites than in blacks.

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Bladder cancer is the second most common cancer of the genitourinary tract. The average age at diagnosis is 65 years. At that time, approximately 85% are localized to the bladder and 15% have spread to regional lymph or distant sites [(2)].

Tumors of the bladder are good example of the way in which certain chemicals cause deadly cancers in men and women. Overall, bladder cancer affects over 50,000 people annually in the United States and accounts for approximately 10,000 deaths. The male to female ratio of occurrence is approximately 3:1 [(1)].

In Iraq, the bladder cancer ranks the 3rd during the last six years. The histological types of bladder cancer have changed during the years (1976-1985), squamous cell carcinoma was dominant (45%), while transitional cell carcinoma was (36%), but recently during the years (1986-1991) the transitional cell type became (45%) and the sequamous cell type became (36%) [(3)].

The objectives of the study are to determine the effect of chemotherapy on the life style for patients who receive chemotherapy, and to identify the patients problems of lifestyle dimensions and then to find out the relationship between lifestyle dimension and demographic variables related to the (age, gender, marital status, occupation and educational level).

Methodology

A descriptive analytic study was carried out throughout the present study to assess the impact of chemotherapy on lifestyle for patient with bladder cancer who attended the out patient clinic department of oncology in Baghdad city. The study was carried out during the period extended from May, 17th 2007 to October 16th 2008.

The setting of the study included the following:

a- Specialty Surgery Teaching Hospital.
b- Al-Yarmok Teaching Hospital.
c- Radiation and Nuclear Medicine Hospital in Baghdad.

A purposive "non-probability" sample of (100) patients who were receiving chemotherapy in Baghdad City was selected.

A questionnaire- interview format was designed and developed by the researcher for the purpose of the study. Such development was employed through the available literature, clinical background and interview with patients with bladder cancer. The questionnaire consisted of (2) parts.

Part I: Demographic Information Sheet
Part II: Lifestyle dimension
a- Physical domain.
b- Psychological domain.
c- Social relationship domain.
d- Spiritual / Religion / Personal Beliefs domains.

The content validity of the instrument was established through a panel of (13) experts. A purposive sample of (10) patient with bladder cancer who were receiving chemotherapy was selected from the outpatients in Specialty Surgery Teaching Hospital according to the previously mentioned criteria. The pilot study was carried out through the period from November 16th, 2007 to December 14th, 2007.

Test-retest reliability was determined through a computation of Pearson Correlations for the scales. Coefficient for the (4) dimension of lifestyle was (r=0.92)

The data were collected by using the questionnaire structured interview technique and the review of the patients' records. Each patient was interviewed personally by the researcher. Throughout each interview, explanation of the study was held-up with patient in order to accept participation. Each interview took approximately from (20-30) minute.

The researcher used the appropriate statistical means in the data analysis which included the following:

1. Descriptive data analysis: this approach was performed through the determination of: (Frequencies, Percentage, Mean, and SD)

2. Inferential data analysis: this approach was performed through the determination of: (Mean of score, Chi-Square (χ^2) test and Pearson correlation coefficient

Results:

Table 1. Distribution of demographic characteristics of (100) patients with bladder cancer who receiving chemotherapy

List	Variables	Frequency	Percent	Cumulative percent
1	Age (years)			
1.1	20-29	2	2	2
1.2	30-39	1	1	3
1.3	40-49	8	8	11
1.4	50-59	20	20	31
1.5	60 and older	69	69	100
2	**Gender**	**Frequency**	**Percent**	**Cumulative percent**
2.1	Male	75	75	75
2.2	Female	25	25	100
	Total	100	100	
3	**Residence**	**Frequency**	**Percent**	**Cumulative percent**
3-1	Urban	82	82	82
3-2	Rural	18	18	100
	Total	100	100	
4	**Marital status**	**Frequency**	**Percent**	**Cumulative percent**
4.1	Single	3	3	3
4.2	Married	89	89	92
4.3	Divorced	3	3	95
4.4	Widowed	3	3	98
4.5	Separated	2	2	100
5	**Number of children**	**Frequency**	**Percent**	**Cumulative percent**
5.1	No children	3	3	3
5.2	1-2	12	12	15
5.3	3-4	28	28	43
5.4	5-6	23	23	66
5.5	7-8	25	25	91
5.6	9 and above	9	9	100
	Total	100	100	
6	**Level of education**	**Frequency**	**Percent**	**Cumulative percent**
6.1	Do not read and write	25	25	25
6.2	Read & Write	22	22	47
6.3	Primary school graduate	26	26	73
6.4	Intermediate school graduate	5	5	78
6.5	Secondary school graduate	8	8	86
6.6	Institute	8	8	94
6.7	College and above	6	6	100

Table 1. (continued)

7	Occupation	Frequency	Percent	Cumulative percent
7.1	Government officer	20	20	20
7.2	Free job	28	28	48
7.3	Retired	26	26	74
7.4	Housewife	24	24	98
7.5	Unemployed	2	2	100
8	**Monthly income**	**Frequency**	**Percent**	**Cumulative percent**
8.1	Sufficient	14	14	14
8-2	Barely sufficient	58	58	72
8-3	Insufficient	28	28	100
9	**Methods of drugs administration**	**Frequency**	**Percent**	**Cumulative percent**
9-1	Foley catheter	78	78	78
9-2	Intravenous	22	22	100
10	**Duration of disease**	**Frequency**	**Percent**	**Cumulative percent**
10.1	1-5 (years)	67	67	67
10.2	6-10	9	9	76
10.3	11-15	18	18	94
10.4	16-20	4	4	98
10.5	21 and above	2	2	100

Table (1) shows that the majority (69%) of the age group was more than 60 year old. Most of the study sample (75%) was male and (82%) living in urban area. Most of them (89%) were married and (28%) had (3-4) children and (26%) was primary school graduate.

The majority of the study samples (28%) is free employee and (58%) has barely sufficient monthly income. Most of the study sample (78%) taking drugs by Foley's catheter and (67%) was suffering from the disease for period extended from (1-5) years.

Table 2. Distribution of the rates of (physical, functional, psychological, social, spiritual, and total lifestyle) score for (100) adult patients with bladder cancer who receive chemotherapy

List	Variables	Frequency	Percent	Cumulative percent
1	**Rate of physical score**			
1-1	Low	20	20	20
1-2	Moderate	69	69	89
1-3	High	11	11	100
2	**Rate of functional score**	**Frequency**	**Percent**	**Cumulative percent**
2-1	Low	7	7	7
2-2	Moderate	42	42	49
2-3	High	51	51	100
3	**Rate of psychological score**	**Frequency**	**Percent**	**Cumulative percent**
3-1	Low	6	6	6
3-2	Moderate	64	64	70
3-3	High	30	30	100

Table 2. (continued)

4	Rate of social score	Frequency	Percent	Cumulative percent
4-1	Low	6	6	6
4-2	Moderate	65	65	71
4-3	High	29	29	100
5	**Rate of spiritual score**	**Frequency**	**Percent**	**Cumulative percent**
5-1	Low	3	3	3
5-2	Moderate	34	34	37
5-3	High	63	63	100
6	**Rate of total life-style score**	**Frequency**	**Percent**	**Cumulative percent**
6-1	Low	4	4	4
6-2	Moderate	85	85	89
6-3	High	11	11	100

Table (2) shows that the high rate of score in [(63%) spiritual dimension, (51%) functional dimension] and moderate rate of score in [(69%) physical dimension, (65%) social dimension, (64%) psychological dimension, and (85%) total lifestyle dimensions].

Table 3. Mean of score for the total items for lifestyle dimension (physical, functional, psychological, social and spiritual dimension

List	Domains	Always	Sometimes	Never	M.S.	Severity
1	Physical dimension	2035	1430	2054	2.04	M
2	Functional dimension	544	423	233	2.26	M
3	psychological dimension	949	776	475	2.22	M
4	social dimension	496	436	268	2,19	M
5	spiritual dimension	606	134	160	2.50	H
6	Total lifestyle dimension	4630	3209	3190	2.16	M

M.S= Mean of scores, M= moderate

Table (3) shows that the mean of score is high on spiritual dimension and moderate on the remaining dimension and the total of lifestyle dimension.

Table 4. Association between the total lifestyle and (age, gender, marital status, educational level and occupation

Age	Total lifestyle			Total	obs. χ^2	C.S
	Low	Moderate	High			
20-29	1	1	0	2	21.83	S
30-39	0	0	1	1		
40-49	0	8	0	8		
50-59	1	18	1	20		
60 and older	2	58	9	69		
Total	4	85	11	100		
df=8		crit. $\chi^2 = 15.51$		P≤0.05		

Table 4. (continued)

Gender	Total lifestyle			Total	obs. χ^2	C.S
	Low	Moderate	High			
Male	4	61	10	75	3.29	N.S
Female	0	24	1	25		
Total	4	85	11	100		
df=2		crit. χ^2 = 5.99		P≤0.05		
Marital status	**Total lifestyle**			**Total**	**χ^2 obs.**	**C.S**
	Low	**Moderate**	**High**			
Single	0	2	1	3	27.31	S
Married	3	79	7	89		
Divorced	1	2	0	3		
Widowed	0	2	1	3		
Separated	0	0	2	2		
Total	4	85	11	100		
df=8		crit. χ^2 = 15.51		P≤0.05		
Educational level	**Total lifestyle**			**Total**	**obs. χ^2**	**C.S**
	Low	**Moderate**	**High**			
No read and write	0	21	4	25	15.54	N.S
Read & Write	0	22	0	22		
Primary school graduate	2	21	3	26		
Intermediate school graduate	0	5	0	5		
Secondary school graduate	1	5	2	8		
Institute	0	6	2	8		
College and above	1	5	0	6		
Total	4	85	11	100		
df=12	crit. χ^2= 21.03			P≤0.05		
Occupation	**Total lifestyle**			**Total**	**obs. χ^2**	**C.S**
	Low	**Moderate**	**High**			
Government officer	2	15	3	20	24.47	S
Free job	2	25	1	28		
Retired	0	22	4	26		
Housewife	0	23	1	24		
Unemployed	0	0	2	2		
Total	4	85	11	100		
df=8	Crit. χ^2= 15.51			P≤0.05		

c.s= comparative significance, crit. χ^2 = critical chi-square, df=degree of freedom, obs. χ^2= observed chi-square, p. value= probability level at P ≤0.05

Table (4) shows that there is a significant association between total lifestyle and (age, marital status and occupation) and there is no significant association between total lifestyle and (gender and educational level).

Table 5. Pearson correlation between (physical, functional, psychological, social, spiritual, and total lifestyle) and (physical, functional, psychological, social, spiritual and total lifestyle

Correlation*	Physical	Function	Psychological	Social	Spiritual	Lifestyle
Physical	1	0.56	0.63	0.54	0.25	0.75
Function	-	1	0.60	0.56	0.19	0.46
Psycho	-	-	1	0.48	0.15	0.64
Social	-	-	-	1	0.31	0.60
Spiritual	-	-	-	-	1	0.42
Lifestyle	-	-	-	-	-	1

***Correlation is significant at the (0.01) level**

Table (5) shows that there is a strong positive relationship between physical and (functional, psychological, social, and total lifestyle) and functional with (psychological and social) and a strong positive relationship between psychological and (total lifestyle) and there is a strong positive relationship between social and (total lifestyle) and there is a moderate positive relationship between the others variables.

Discussion:

The result of the study showed that the majority (69%) of the age group was more than (60) year old. Most of the study sample (75%) was male and (82%) living in urban areas. Most of them (89%) were married and (28%) had (3-4) children and (26%) was primary school graduate. The majority of the study samples (28%) was free employee and (58%) has barely sufficient monthly income. Most of the study sample (78%) taking drugs by Foley's catheter and (67%) was suffering from the disease for a period extended from (1-5) years (Table 1).

Bladder Cancer is most common among the ages of 60 and 70 years [4]. It is four times more frequent in men than in female among Scottish [5].

The findings are supported by Iraq Cancer Board [6] which reported that most of the incidences of bladder cancer are in urban areas.

Married patients with cancer showed a higher mean (12.32) than the single mean (11.92) [7]. It was reported that lack of education can empower them to make decisions to protect and improve their own health [8].

Most of patients with bladder cancer who receive chemotherapy were retired in Jordan [9]. This result was supported as that low income and disadvantaged groups are generally exposed to avoidable cancer risk factor [8]. All cancer patients who are treated with intravesical chemotherapy suffer from unpleasant side effects [10]. Moreover, it was stated that the duration of diagnosis of the bladder cancer was (2-20) [11].

The findings of the study showed that the high rate score in [(63%) spiritual dimension and (51%) functional dimension] and moderate rate score in [(69%) physical dimension, (65%) social dimension, (64%) psychological dimension, and (85%) total lifestyle dimensions] (Table 2). This means that the lifestyle dimension was high for patients with bladder cancer who receive chemotherapy.

The score of lifestyle dimension was moderate for the patients with bladder cancer under treatment by chemotherapy [12].

The high score in spiritual dimension was supported by [13] as it was reported that patients with cancer were high incidence of beliefs in God.

The findings of the study showed that the mean of score is high on spiritual dimension and moderate on the remaining dimensions and the total of lifestyle dimension (Table 3). This result is supported by a study which found that religious beliefs and practices such as the

prayer for a lot of patients were important part of their lives as a source of comfort or something that is important during their illness and treatment [14].

The findings of the study show that there is a significant association between total lifestyle and (age, marital status and occupation) and there is no significant association between total lifestyle and (gender and educational level) (Table 4).

There is a significant difference between total lifestyle and (age, marital status and occupation). This means that chemotherapy affects total lifestyle of one group of (age, marital status and occupation) and there is no significant difference between total lifestyle and (gender and educational level). This means that chemotherapy affects total lifestyle equal or nearly equal of (gender and educational level).

To support this study, it was revealed that there is a significant difference among lifestyle and physical and psychosocial problems in cancer patients after chemotherapy treatment according to (gender, ages, kind of job, social status and education levels) [9].

The findings of the study show that there is a strong positive relationship between physical and (functional, psychological, social, and total lifestyle) and functional and (psychological and social) and a strong positive relationship between psychological and total lifestyle and there is a strong positive relationship between social dimension and total lifestyle and there is a moderate positive relationship between other variables (Table 5). Correlation is significant at the (0.01) level.

The results mean that increase of physical problems lead to increase in the functional, psychological, social, and total of lifestyle problems.

The findings also mean that there are increased functional problems that lead to increase in psychological and social problems, then increase of psychological problems lead to increase in total lifestyle problems.

This study is supported by a study which found that there is a significant interaction between physical and functional activity [15].

There is a relationship between functional and poorer physical and social problem [17].

Recommendations:

Based on the conclusions, the study recommended the following:

1- Nurses working in oncology centers must have adequate knowledge of basic research to be applied in clinical practice, because the nursing care of patients with bladder cancer who receive chemotherapy depends on understanding the scientific principles of bladder cancer treatment and its effects on patients on patients. Lack of this knowledge make them unable to find-out the patients' problems and cannot plan effective nursing care.

2- A study can be conducted to investigate the physical and psychological problems of the patients and employees who have bladder cancer to develop information and counseling.

3- To determine the rang and timing of information that would best help patients take care of themselves and manage side effects of chemotherapy, and also define the setting of delivering information that would best promote a sense of sharing among patients.

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