Original article

Evaluation of Leukemic Patient`s Compliance with Oral Chemotherapy in Baghdad City

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Abstract:

Background: Noncompliance is a major obstacle to the effective delivery of health care. Estimates from the World Health Organization (WHO) indicate that only about 50% of patients with chronic diseases living in developed countries follow treatment recommendations

Objectives: To evaluate the leukemic patient`s compliance with oral chemotherapy in Baghdad city.

Material and methods: A descriptive study was carried out at Baghdad hospitals (Baghdad teaching hospital, and nursing home hospital). Started from 11 of December 2012 to 27 of June 2013. A non-probability (purposive) sample of 60 patients with leukemia and they were on oral chemotherapy. The questionnaire was designed and constructed by the researcher according to review of literatures and related studies. The content validity of the instrument was established through penal of (11) experts. Reliability of the patient compliance was determined by test-retest method which was estimated as average (r=0.851).Data was gathered by interview technique using the questionnaire format and data was analyzed by application of descriptive and inferential statistical methods.

Results: Regarding age group (20-29) years was the larger group (31.7%). Nearly equal percent of male to female (48.3% and 51.7% respectively). Larger group (38.3%) of sample was primary school in educational level and (65%) of sample has less than one year illness duration. The result indicates the patient compliance with oral chemotherapy in which (55%) of patients was compliance and (45%) was not compliance with oral chemotherapy. The result also shows that there are no significant relationship at $P>0.05$ between (age groups, gender and educational level), and patient compliance to chemotherapy, which there are significant correlation at $P<0.05$ between patients duration of illness and patient`s compliance to chemotherapy.

Conclusion: The results reveals that the majorities of study group were (20-29) years old, nearly equal percent of male to female, and primary school in educational level. The result indicated that (45%) of patients with leukemia are not compliance to oral chemotherapy.

Key words: Factors, leukemic patients, compliance, oral chemotherapy

Introduction

Noncompliance is a major obstacle to the effective delivery of health care. Estimates from the World Health Organization (WHO) indicate that only about 50% of patients with chronic diseases living in developed countries follow treatment recommendations [1].

Major barriers to compliance are thought to include the complexity of modern medication regimens, poor health literacy and lack of comprehension of treatment benefits, the occurrence of undiscussed side effects, the cost of prescription medicine, and poor communication or lack of trust between the patient and his or her health care provider [2]. Noncompliance has also been associated with an increase in physician visits, higher hospitalization rates, and longer hospital stays [3].

Efforts to improve compliance have been aimed at simplifying medication packaging, providing effective medication reminders, improving patient education, and limiting the number of medications prescribed simultaneously [4].

Dosing schedule is an important factor in the effectiveness of some chemotherapeutic agents, and taking drugs more or less frequently than prescribed may affect therapeutic efficacy. Furthermore, the degree of compliance required to achieve the desired treatment goal is likely to vary from one regimen to another [5]. The **aim of this study was** to evaluate the leukemic patient`s compliance with oral chemotherapy in Baghdad city.

Materials and methods

A descriptive study was carried out at Baghdad hospitals (Baghdad teaching hospital, and nursing home hospital). Started from 11 of December 2012 to 27 of June 2013. A non-probability (purposive) sample of 60 patients with leukemia and they were on oral chemotherapy.

The questionnaire was designed and constructed by the researcher according to review of literatures and related studies. The content validity of the instrument was established through penal of (11) experts.

Reliability of the patient compliance was determined by test-retest method which was estimated as average (r=0.851).Data was gathered by interview technique using the questionnaire format and data was analyzed by application of descriptive and inferential statistical methods. The Morisky and Green Test are used to evaluate attitudes regarding treatment. It is made up of four questions, with Yes-No answers. Yes stands for 0 and No stands for 1. The patient compliance to treatment is considered for a score of four points. With three or fewer points, the patient is non-compliant.

Result:

Table 1: Observed Frequencies, Percents and Cumulative Percents of Patient's Demographical Characteristics.

Dem. characteristics	Groups	Freq.	Percent	Cum. Percent
Age Groups	10 - 19	11	18.3	18.3
	20 - 29	19	31.7	50
	30 - 39	8	13.3	63.3
	40 - 49	10	16.7	80
	50 - 59	9	15	95
	60 - 69	1	1.7	96.7
	70 ≥	2	3.3	100
Gender	Male	29	48.3	48.3
	Female	31	51.7	100
Educational level	Illiterate	10	16.7	16.7
	Reads and writes	3	5	21.7
	Primary school	23	38.3	60
	Intermediate School	17	28.3	88.3
	Secondary School	4	6.7	95
	College and more	3	5	100
Duration of illness	Less than 1 year	39	65	65
	1 – 5 years	16	26.7	91.7
	5 – 10 years	3	5	96.7
	More than 10 years	2	3.3	100

Freq: Frequency, Cum. Percent: Cumulative percent.

Table number (1) indicates that the observed frequencies, percents and cumulative percents of demographical characteristics variables in the sample which age group (20-29) years were the larger group (31.7%). Nearly equal percent of male to female (48.3% and 51.7% respectively). Larger group (38.3%) of sample was primary school in educational level and (65%) of sample has less than one year illness duration.

Table 2: Distribution of the Patients Compliance with Chemotherapy.

Parameters	Compliance		Not compliance		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Patient compliance to chemotherapy	33	55	27	45	60	100

Table (2) indicates the patient compliance with chemotherapy in which (55%) of patients was compliance and (45%) was not compliance with chemotherapy.

Table 3: Association between the Patient's Demographical Data and their Compliance to Chemotherapy

Patient's Demographical Data	Chi-Square test			
	Value	df	Approx. Sig.	C.S.
Age Groups	2.011	6	0.919	NS
Gender	0.133	1	0.715	NS
Education levels	10.315	5	0.067	NS
Duration of illness	10.809	3	0.013	S

NS: Non Significant at P>0.05, S: Significant at P<0.05, C.S.: Computed Significant

This table shows that there are no significant relationship at P>0.05 between (age groups and gender), and patient compliance to chemotherapy, which there are no significant correlation at P>0.05 between patient's educational level and their compliance to chemotherapy while according to the actual P-value is more informative to be reported [6]. in other words we had a confidence within not less than 92.5% of a meaningful differences presented would be. and there are significant correlation at P<0.05 between patients duration of illness and their compliance to chemotherapy.

Discussion:

Throughout the course of data analysis table number (1) indicates that the majority of the samples were (20-29) years old who were a counted (31.7%). This finding comes along with result obtained from study done by (Hartigan, 2003) which indicated that majority of the patient's age were (20-30) years old[7].

In relation to gender, nearly equal percent of male to female (48.3% and 51.7% respectively). This result is compatible with (Marques and Pierin, 2008) which indicated that equal percent of male and female in his study [8].

Relative to educational level larger group (38.3%) of patients was primary school. This finding agrees with results obtain from study done by (Atassi, et al., 2011) which indicated that the majority of the patients in their study was low educational level [9].

Regarding to duration of illness (65%) of patients has less than one year illness duration. This result is compatible with (Selen, et al., 2003) which indicated that most of sample has less than one year's illness duration [10].

Throughout the course of data analysis table number (2) indicates that the (45%) of patients are not compliance to chemotherapy. This finding comes along with result obtained from study done by (Selen, et al., 2003) which indicated that (41.9%) of samples are not compliance with chemotherapy [10].

In this study the results in table (3) reflect that there is no relation between patient's age and their compliance to chemotherapy. This result is compatible with (Patricia, and Angela;2008) which indicated that there is no relation between patient's age and their compliance to chemotherapy [11].

Regarding gender, there is no relation between patient's gender and their compliance to chemotherapy. This result is compatible with (Atassi, et al., 2011) which indicated that there is no relation between patient's sex and their compliance to chemotherapy [9].

In regard to educational level, the result of study indicated that educational level play role in compliance of patients to chemotherapy but this was not statistically significant, while the actual P-value is more informative to be reported. This finding agrees with results obtain from other studies done by (Carolyn, 2006) which indicated that there are good relation between patient's educational level and their compliance to chemotherapy [12].

Regarding duration of illness there is significant relation between patient's years of illness and their compliance to chemotherapy. This result is compatible with (Hartigan, 2003) which indicated that there was positive relation between the duration of patient's illness and the compliance to chemotherapy [7].

Conclusion:

1. The samples are nearly equal in gender (male and female), and larger age group was (20-29) years old.
2. Most of the patients have primary school in educational level.
3. The majority of patients have less than 1 year illness duration.
4. Most of patients were not compliance to chemotherapy.
5. there are no significant relationship at P>0.05 between (age groups and gender), and patient compliance to chemotherapy, which there are no significant correlation at P>0.05 between patient's educational level and their compliance to chemotherapy while according to the actual P-value is more informative to be reported and there are significant correlation at P<0.05 between patients duration of illness and their compliance to chemotherapy.

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