Compliance of Hypertensive Patients with Medications at Marjan Teaching Hospital in Babylon Governorate

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Abstract

Hypertension is a significant problem around the world. As indicated by World Health Organization. **Objectives**: The aims of this study was to assess the compliance of hypertensive adults with their treatment, and to assess their socio-demographic characteristics in relation to compliance. **Methodology**: The study was conducted at the medical outpatients' clinic in a period from 1st November 2018 to 10th march 2019 Marjan Teaching Hospital. Collecting data from simple random sampling total of (50) hypertensive patients who are using antihypertensive treatment and attending the medical outpatients' clinic at Marjan Teaching Hospital in Babylon Governorate. **Results**: The majority of the study participants were female who accounted for (64%) of the total participants while male constituted (36%). Most of the study participants (42%) were between ages 60 years old more. Most of the respondents (63%) were diagnosed more than five years ago. (44%) of the sample have poor level of compliance with medications, and (50%) had poor control of blood pressure. **Conclusions**: There is very low rate of medication compliance, and BP control with strong association between them, that reinforce the relation between them.

Keywords: *Compliance, Hypertension patients, Medications at Marjan Teaching Hospital*

Introduction

Hypertension is a significant problem around the world. As indicated by World Health Organization, hypertension influences 970 million individual and approximately 68 million adults have hypertension. Globally the overall propagation of hypertension in population between age 25 and more was about 40% in 2008 [1] .

Hypertension is constitutes a predisposed factor for heart and vascular diseases which results precocious death. Hypertension is known as abnormally high systolic or diastolic blood pressure levels. It means continual systolic blood pressure (SBP) equal to or greater than 140 mmHg and/or continual diastolic blood pressure (DBP) equal to or greater than 90 mmHg .This increasing of (SBP) and (DBP) is well distinguished as an important risk factor for brain stroke coronary heart disease (CHD), (ESKD) and surprising dying [2] .

According to the American Heart Association, (2013) there are several factors influences compliance medication regimen to hypertensive: knowledge of treatment , long period going treatment, level of education, unread and write, and bad association with health care services , attitudes toward medication and adverse effects, psycho social factors, economics status, getting to health care, absence of health insurance, disease without symptoms and inconvenience. Usually treatment non- adherence is linked with progress age, males, poorness, obesity , cigarette smoking, disease embattle, and lower social support [3] .

Based on high prevalence and burden of HT, achieving best control rates of HT is top priority internationally, but control rates still low worldwide. Chow et al. 2013 in a multinational study indicate only 32.5% control rate of HT (Systolic Blood Pressure (SBP) <140 mmHg and Diastolic Blood pressure (DSP) <90 mmHg) and it was 20.7%, 33.6%, 38.5% in Africa, Middle East and North America and Europe respectively[4] .

Compliance is a significant problem in HT and evidence shows that just half of patients who initiate drug therapy are adherent with treatment after 1year in USA, and poor or noncompliance produce uncontrolled HT

that will lead to worsen condition and higher possibility for developing complications including ischemic heart disease, renal failure and cerebrovascular accidents and others [5,6] . A shortage of knowledge about the severity of the disease and the importance of compliance to the prescribed treatment, may constitute barriers to compliance behavior. Ensuring patients' compliance with anti-hypertensive medications and lifestyle modifications to prevent complications of hypertension remains a major challenge to public.

Nurses, can play an essential role in facilitating patient adherence to the prescribed treatment regimen. As they responsible to help patients acquire knowledge, skills and change attitude necessary to maintain compliance, they plays an important role on helping the people learn to live with and control his hypertension, to encourage compliance with antihypertensive therapy [7] .

This study conducted at the medical consultation clinics of Marjan Teaching Hospital in Babylon Governorate. The aims of this study were to assess the compliance of hypertensive adults with their treatment, and to assess their socio-demographic characteristics in relation to compliance.

Methodology

A descriptive cross sectional study was conducted at the medical consultation clinics of Marjan Teaching Hospital for adult patients with hypertension that were on follow up as outpatients in clinic of the Hospital in Babylon. Oral consent was taken from each patient before to interview, after a brief explanation on the study and its objectives.

The study was conducted from 1st novomber 2018 to 10th march 2019 Marjan Teaching Hospital in Babylon Governorate.

The study population consisted of (50) adult hypertensive patients on treatment and attending outpatient clinics in the hospital. These patients are followed up in the hospital for regular treatment and checkups depending on high blood pressure control. A structured interview questionnaire that was developed by the researchers according to literature review. It divided into two parts. Part I: Demographic Information Sheet (14 questions). Part II: compliance with medication regimen (8 questions). All the items responses were noted on a 3-point Likert scale. The response options were: every never (1), frequently (2), always(3).

The validity of the questionnaire was confirmed by (10) experts. A self-administered structured questionnaire was used to collect the socio-demographic characteristics of the patient's respondents, Factors that influence treatment compliance. Data collection from January to February 2019. The data were analysed through Statistical Analysis was done using Statistical Package for Social Sciences (SPSS V 21.0).

Results

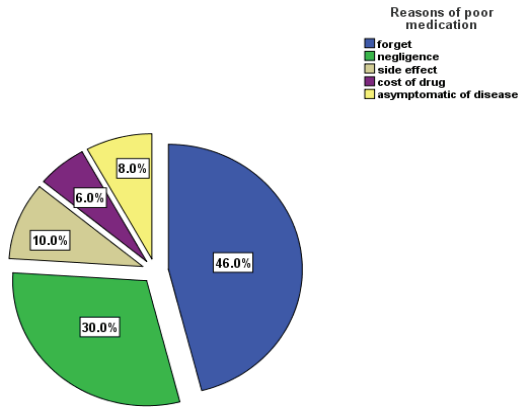

Figure 1: Reasons of poor compliance to medication

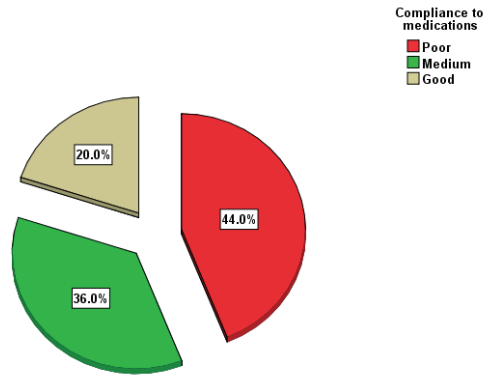

Figure 2: Compliance to medications according to the items responses among hypertensive patients.

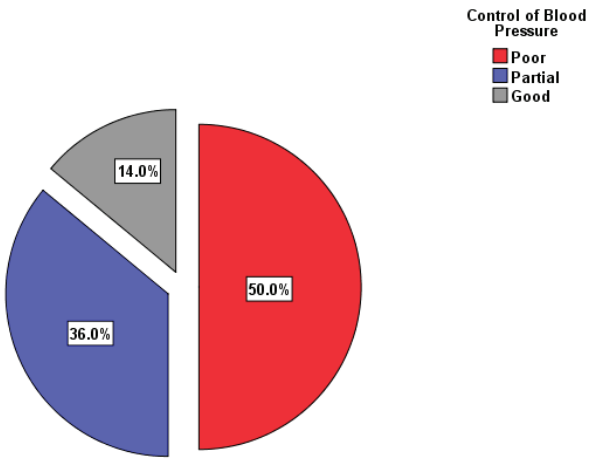

Figure 3: Blood pressure control levels among patients with HT

Table 1. Association between compliance to medications and socio-demographic Characteristics

Demographics		Compliance to Medication								P- value
		Poor		Medium		Good		Total		
		N 22	% 44.0	N 18	% 36.0	N 10	% 20.0	N 50	% 100	
Gender	Male	8	16.0	7	14.0	3	6.0	18	36.0	0.015
	Female	14	28.0	11	22.0	7	14.0	32	64.0	
Age (Years)	20 – 39	6	12.0	3	6.0	3	6.0	12	24.0	0.233
	40 – 59	9	18.0	4	8.0	4	8.0	17	34.0	
	≥ 60	7	14.0	11	22.0	3	6.0	21	42.0	
Marital status	Married	20	40.0	14	28.0	8	16.0	42	84.0	0.110
	Single	2	4.0	0	0.0	0	0.0	2	4.0	
	Others	0	0.0	4	8.0	2	4.0	6	12.0	
Residence	Urban	11	22.0	11	22.0	7	14.0	29	58.0	0.385
	Rural	11	22.0	7	14.0	3	6.0	21	42.0	
Occupation	Government Employee	1	2.0	4	8.0	1	2.0	6	12.0	0.391
	Student	1	2.0	0	0.0	0	0.0	1	2.0	
	Housewife/ Jobless/ retired	20	40.0	14	28.0	9	18.0	43	86.0	
	Free work	0	0.0	0	0.0	0	0.0	0	0.0	
Education	unlearned	10	20.0	12	24.0	4	8.0	26	52.0	0.144
	Primary school	3	6.0	2	4.0	3	6.0	8	16.0	
	Secondary school	8	16.0	2	4.0	2	4.0	12	24.0	
	Institute and more	1	2.0	2	4.0	1	2.0	4	8.0	
Smoking	Smoker	2	4.0	3	6.0	0	0.0	5	10.0	0.064
	Non smoker	20	40.0	15	30.0	10	20.0	45	90	
Sleeping	Less than 8 hours	7	14.0	5	10.0	3	6.0	15	30.0	0.765
	8 hours	15	30.0	12	24.0	7	14.0	34	68.0	
	More than 8 hours	0	0.0	1	2.0	0	0.0	1	2.0	

Cont... **Table 1. Association between compliance to medications and socio-demographic Characteristics**

No. of drugs	One	21	42.0	12	24.0	7	14.0	40	80.0	0.050
	Two	1	2.0	6	12.0	3	6.0	10	20.0	
	≥ 3	0	0.0	0	0.0	0	0.0	0	0.0	
Duration of diagnosis	1 – 5 years	15	30.0	6	12.0	6	12.0	27	54.0	0.048
	6 – 10	6	12.0	5	10.0	2	4.0	13	26.0	
	More than 10 years	1	2.0	7	14.0	2	4.0	10	20.0	
Monthly income	Enough	6	12.0	5		3	6.0	14	28.0	0.711
	Not enough	11	22.0	7	14.0	6	12.0	24	48.0	
	Sometimes enough	5	10.0	6	12.0	1	2.0	12	24.0	
BMI	Under weight	0	0.0	0	0.0	1	2.0	1	2.0	0.279
	Normal weight	11	22.0	9	18.0	4	8.0	24	48.0	
	Over weight	7	14.0	3	6.0	4	8.0	14	28.0	
	Obese	4	8.0	6	12.0	1	2.0	11	22.0	
Based on Chi-squire test: Highly Sig. At P<0.01; Sig. At 0.01>P> 0.05; and Non Sig. At P>0.05										

Table 2. Association between compliance to medications and control of blood pressure

	Compliance to Medication								
control of blood pressure	**Poor**		**Medium**		**Good**		**Total**		**P- value**
	N 22	% 44.0	N 18	% 36.0	N 10	% 20.0	N 50	% 100	
Poor	8	16.0	11	22.0	6	12.0	25	50.0	0.007
Partial	10	20.0	5	10.0	3	6.0	18	36.0	
Good	4	8.0	2	4.0	1	2.0	7	14.0	
Based on Chi-squire test: Highly Sig. At P<0.01; Sig. At 0.01>P> 0.05; and Non Sig. At P>0.05									

The table revealed that the majority of the study participants were female who accounted for (64%) of the total participants while male constituted (36%). Regarding age (42%) were from the age group (60 years and more); (84%) of the patients were married, and (58%) lives in urban area. According occupation (86%) were housewives/ jobless/ retired, (52%) were unlearned (illiterate or read and write), and (90%) were non-smokers, while sleeping pattern (68%) were of them sleeping 8 hours. Regarding number of drugs (80%) were have one drug, (48%) were have not enough monthly income, and (48%) were have normal weight.

According reasons of poor medications the forgetfulness was the first cause of non-compliance to medication (46%), followed by negligence and carelessness of patients (30%), side effect (10%), asymptomatic nature of HT disease (8%), and cost of drug (6%), according to patients opinion was and as shown in Figure 1. And (44%) of the sample have poor level of compliance with medications Figure 2, (50%) had poor control of blood pressure, as shown in Figure 3.

Discussion

The present study was carried out to determine the

compliance of patients with hypertension with their treatment regime. The results of the study revealed that the majority of the study participants were women who accounted for (64%) of the total participants while male constituted (36%), the female were more compliant (14%) compared with male (6%). Most of the study participants (42%) were between ages 60 and above years old, the most participants who were (40-59) years of age had good level of treatment compliance compared to those with 60 and above years of age. (84%) of the patients were married, married group has highest percentage of acquiescence toward medication compliance. (52%) of the participants had unlearned. The majority of the participants were (58%) lived in urban. Majority of them (54%) were diagnosed between than (1-5) years.

These results are in conformity with the findings obtained from other studies, who state that high proportion of clients with whole medication compliance corresponded to the female (66.7%), The participated sample were age from (40 – 80) years ,approximately two-third of patients (68.12%) that ages over 60 years , and residual of them 24.63% age between 50 and 59 years [8,9] .

This finding was coincided to a study conducted by other researchers stated that medication compliance rates were also significantly higher between ages (45-64) than younger or older age groups. The majority (63%) lived in urban areas while the rest (37%) lived in rural areas. Majority of them (63%) were diagnosed more than five years ago [10].

There are many factor affect the patients drugs treatment compliance, the main cause for poor compliance to medication as the patients indicates was forgetfulness to take medications (46%) (figure 1), they taking medications only when they develop symptoms such as headache and not take medication when they feel comfortably. Poor knowledge of the disease and ignorance of need for long-term treatment was reported as main cause by Busari et al 2010 [11] , whereas self-awareness of disease remission was second cause of noncompliance in Dong et al 2013 [12] .

The results of present study show low rate (20%) of patients with good compliance with medication, whereas the majority of the patients (44%) had poor compliance to medication (figure 2). The low rate of compliance is less than that reported by different researchers that were (70%, 67.1%, 53.4%, 43.5%, 32.1%) respectively [13,14,15,16,17]. While it was higher than the 13.24% compliance rate reported by Dosee et al 2009 [18] . Low BP control (50%) obvious in this study, with the fact of the direct association between better compliance to treatment with higher control rates of blood pressure make it a serious issue (figure 3). This differences in results from different societies could be related to variation in cultures, educational standards, beliefs about disease and treatment, as well health services development but still compliance to medications and control of BP is weak the worldwide.

Conclusions

1. There is no significant relationship between social demographic characteristics except gender, no. of drugs, and duration of diagnosis.
2. There is very low level of medication compliance, and low level of BP control with, and there is a strong association between them, that reinforce the relation between them.
3. The main reasons for noncompliance were forgetfulness, followed by negligence then side effect of medications.

6. Recommendations

1. Educate the patients about the use of their medication should be done diligently, primarily by the prescriber then health care professional.
2. Educate the patients to avoid high risk complication that threatening life result from poor treatment compliance.
3. Health education programs about hypertension should be campaigns state through the mass media as television and radio, social media, illustrated booklet, and pictures.
4. Health education programs for the healthcare professionals to arise their awareness, attitude and adaptation of the patient as to their own disease.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the College of Nursing and all experiments were carried out in accordance with approved guidelines.

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