Compliance to Medical Therapy among Hypertensive Patients Attending the Out Patient Department of AL-Yarmouk Teaching Hospital

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Abstract:

Objective: To determine the compliance of hypertensive patients to their medical therapy.

Method: Across- sectional study was carried out among 280 hyper tensive patients attending the out –patient department of AL-Yarmouk Teaching hospital between 1st of NOV2002-end of FEB2003. The data was collected by direct interview with each patient according to special questionnaire form.

Results: The study showed that 187(66.8%) of the patients were complaint with their medical treatment regularly, while 93(33.2%) were non- complaint .poor concept of the disease and in correct information about the usage of drugs were the main reasons of non-compliance .Females and illiterate patients were significantly more compliant to medication than males and highly educated patients .Both monotherapy and single dose therapy had significantly influenced compliance to therapy .It was found that patients who were regular on follow- up were significantly more compliant than those who were irregular.

Conclusion: One- third of patients didn't take their medication regularly .Therefore, we recommended that hypertensive patients should have a better opportunity to know more about their disease , its risk factors and complications as well as the importance of compliance to their treatment.

Key words: Compliance, Medical Therapy, Hypertension.

Introduction:

Hypertension is potentially, a controllable disease, yet untreatable, poor control of blood pressure is a major problem frequently encountered in health practice and it has great negative impact on health services. Many researches believe that one of the major causes in uncontrolled blood pressure is failure to take medication as directed[1].

Low compliance to medication is an inherent problem in the treatment of chronic, asymptomatic conditions and is one reason why hypertension may not to be treated effectively [2,3].

The silent nature of hypertension often encourages the tendency of patients to be non-compliant , although factors such as the nature of treatment regimen , side effects of the drugs , socio demographic factors and factors related to the patient's milieu are also involved [4].

The present study was carried out to determine the compliance of hypertensive patients to their medical therapy.

Patients & methods:

Across-sectional study was carried out over a period of 4 months , from the 1st of November 2002 to the end of February 2003.The sample studied included (280) known cases of essential hypertension with definite diagnosis made previously by a consultant doctor for at least one year duration and who were under medical treatment attending the out patient department of AL-Yarmouk Teaching Hospital.

Information was obtained by direct questioning of the patient, using a standard questionnaire form.

Compliance was measured by direct questioning of the patient and it depends on the patient's answer if he/she was taking the medication regularly or not[5,6].

Blood pressure of all patients was measured by the investigators by using a standardized mercury sphygmomanometer with a standard adult cuff. Blood pressure was recorded after five minutes of rest and in a sitting position. The mean of two readings was considered and recorded.

Controlled blood pressure was defined as systolic BP<140mmHg and diastolic BP<90mmHg.Readings above any of these levels were considered as uncontrolled blood pressure[7]. The data presented as number and percentages. The association between different variables was tested using chi-square test ,with the level of significance taken less 0.05.

Results:

The total sample studied was 280 hypertensive patients age ranged between (27-85) years, with a mean of (58.82±12.51) years.

Of the total 280 patients, 187(66.8%) were taking there medicine regularly (compliant with their therapy), while the remaining 93(33.2%) were on irregular treatment (noncompliant). [Table-1].

Table-2 Shows the reasons for non-compliance to treatment among the study group.

Patients were taking their drugs regularly (compliant) had better blood pressure control (42.8%) than those who were on irregular treatment (non-compliant) (30.1%). The association was statistically significant ($p<0.05$) [table-3].

Table – 1: Distribution of the study sample according to compliance to therapy.

Regularity of drug intake (compliance)	No.	%
Regular intake (compliant)	187	66.8
Irregular intake (non-compliant)	93	33.2
Total	280	100

Table-2: The reasons for non-compliance among the study sample.

Reason for non-compliance	No.	%
Wrong concept i.e. patient takes medication on need	40	43
Because it produces some side effects	25	26.9
Patient feels that he is not more sick and no need for treatment	10	10.8
The drugs are not available	5	5.4
The drugs prescribed are expensive	4	4.3
The patient didn't know that he should take it regularly	2	2.1
Others	7	7.5
Total patients who were not compliant	93	100

Table –3: The distribution of the study sample according to compliance to therapy and blood pressure control

BP control Compliance	Controlled No.%	Uncontrolled No.%	Total
Compliant	80(42.8)	107(57.2)	187
N0n-Compliant	28(30.1)	65(69.9)	93
Total	108	172	

P<0.05 (Significant)

Table-4 Shows the distribution of patients by some demographic variables and compliance to therapy.

The results showed highly statistical significant association between drug regimen and compliance to therapy [table-5]. As patients taking one drug had the highest compliance rate (86.7%).

Compliance tends to decrease with increasing number of drugs taken, also the compliance rate was higher among patients using single dose therapy (78.1%).Table-6 Shows the relation ship between patients follow-up and compliance to therapy, it was evident that patients who were regular on follow-up had higher compliance rate(73.6%)than those who were irregular (54.1%) (P<0.001).

Table – 4: The distribution of the study sample by compliance to therapy and some demographic variables

Age(years)	Compliant No. (%)	Non compliant No. (%)	Total	P-value
<40 years	12(66.7)	6(33.3)	18	
40-59 years	90(68.2)	42(31.8)	132	
>60 years	85(65.4)	45(34.6)	130	P>0.05
Total	187	93	280	
Sex				
Male	52(58.5)	44(41.5)	106	
Female	125(71.8)	49(28.2)	174	P<0.05
Total	187	93	280	
Educational Level				
Illiterate	54(79.4)	14(20.6)	68	
Read &Write	15(55.6)	12(44.4)	27	
Primary school	32(84.2)	6(15.8)	38	P<0.01
Secondary school	24(55.8)	19(44.2)	43	
College (+)	62(59.6)	42(40.4)	104	
Total	187	93	280	

Table – 5: The distribution of the study sample by their compliance to therapy and drug regimen.

No. of drugs	Compliant No. (%)	Non compliant No. (%)	Total	P-value
One	130(86.7)	20(13.3)	150	
Two	51(48.6)	54(51.5)	105	
Three and over	6(24.0)	19(76.0)	25	P<0.001
Total	187	93	280	
Drug regimen				
Single dose therapy	139(78.1)	39(21.9)	178	
Multi dose therapy	48(47.1)	54(52.9)	102	P<0.001
Total	187	93	280	

Table – 6: The distribution of the study sample by their compliance to therapy and follow-up of patients

Patient's follow-up	Compliant No. (%)	Non compliant No. (%)	Total
Regular	134(73.6)	48(26.4)	182
Irregular	53(54.1)	45(45.9)	98
Total	187	93	280

P<0.001 (Significant)

Discussion:

The present study showed that the compliance rate among the study sample was relatively high as compared with what reported by others [6,8,9] as the compliance rates were (59.6%) and (61.5%) respectively.

The differences observed in compliance rate in different areas might be attributed to the cultural differences as well as differences in the organization of medical follow-up system.

Details of the causes of the non-compliance showed that poor concept was the leading cause of non-compliance in the present study. This result was similar to that found by other study conducted in Iraq [10].

The hypertension control level was relatively low (38.6%) , in spite of the relatively high compliance rate. This results was still higher than that reported in several studies conducted in many developing countries [11,12,13].

The results revealed that the age of patients in our studied sample did not affected compliance to medical therapy, this results was in agreement with that documented by previous studies[6,14]in which it was found that age had no significant influence up on patient's compliance .

On the other hand, there was a significant variation of compliance with gender, as females had significantly higher compliance rate than males.

This result was in disagreement with that found by others in which there was no variation of compliance in relation to gender[5,6,14].

In our studied sample, it was found that compliance rate was significantly higher among illiterate patients and that the more educated the patient, the less adherent he is to his therapy. This can be explained by the fact that the illiterate people in our society carry a high respect for their physician and obey his orders and advices regarding medication more than the educated people. This finding was similar to other study [6].

The results showed that mono therapy was used by slightly more than half of the total sample (53.6%),this method is desirable for the patient to let him more compliant with therapy . this result was in agreement with that found by others[15,16], also single dose therapy had better compliance rate than multiple dose therapy. This result coincides to that found in several studies[9,10,17], as single dose therapy is much more convenient to the patient , simplifying the treatment regimen by means of a reduced number of daily tablets taken by the patient thus improving compliance dramatically.

Finally our study had shown that compliance rate was significantly higher among patients who were on regular and continuous follow-up, this might be due to more frequent contacts with the health care system, more communication and greater opportunity for blood pressure measurement. This result was similar to the results reported by others[5,14]. These results clearly reveals the importance of regular follow-up in achieving better compliance emphasizing the need for health education to enforce this habit.

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