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Original Article

Non-compliance of antihypertensive medication among female patients

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Abstract

Background: Hypertension is an overwhelming global challenge. It is one of the most important modifiable risk factors for cardiovascular diseases. Poor compliance with treatment is the most important cause of uncontrolled blood pressure.A number of concerning antihypertensive drug compliance has been conducted worldwide, although a little research in this topic has been conducted in Bangladesh. So, it will be time demanded job to study the noncompliance to anti hypertension drugs in patients with essential hypertension. In this study, we want to see the socio demographic features associated with treatment noncompliance in hypertension.

Methodology: It was a cross sectional type of Observational study conducted at department of medicine, Dhaka National Medical College. Study done from 1st October 2013 to 31st March 2014 on 100 female patients with diagnosed Hypertension.

Result: In this study about 64%of the patients were non compliant to treatment and 36% were compliant to their treatment. Location ,family size, and monthly income of patients family were socioeconomic factors that had statically significance when it comes to compliance. In my study reasons for not taking the medication included misconception to antihypertensive drug (31.25%) others like forgetfulness, journey (20.31%) and poor financial condition (17.19%).

Introduction:

Hypertension is one of the most important modifiable risk factors for cardiovascular disease. It is poorly controlled worldwide. It is estimated that almost one-half of patients drop out entirely from treatment within one year.[1] Poor compliance with treatment is the most important cause of uncontrolled blood pressure.[2] More than 50% of patients in the United States, who were prescribed antihypertensive medications actually discontinued therapies within 12 months.[3] Multiple factors contribute to poor compliance. A common reason given for stopping medication relates to adverse effects, although the patients knowledge about the disease, and attitudes regarding treatment, personal health beliefs, together with cost of medications and availability of healthcare, are major contributors.[12] Therefore, the objectives of this study are as follows:

a. To assess the percentage of noncompliance to anti hypertensive medication in female patients

b. To identify causes of non-compliance.

Materials and Method:

It was a cross sectional type of Observational study conducted at department of medicine, Dhaka National Medical College. Study done from 1st October 2013 to 31st March 2014 on 100 female patients with diagnosed Hypertension.

Inclusion criteria:

- Female patients with diagnosed hypertension attending medicine department of DNMC&H
- Receiving antihypertensive drug for at least 3 month during the time of interview
- Voluntary given consent

Exclusion criteria:

- Not given consent
- Receiving antihypertensive drug less than 3 month

Result:

In this study 100 hypertensive patients surveyed for this study. The results of the study are as follows.

Table 3.1: Status of non compliance to Medication

Non compliance to Medication	Frequency	Percent
Non compliant	64	64
Compliant	36	36
Total	**100**	**100**

64% patients were non compliants to treatment and 36% were compliants to their treatment.

Table 3.2: Age group of non compliant population

Age group	Frequency n=64	Percent
34-40yrs	11	17.19
41-50yrs	17	26.56
51-60yrs	17	26.56
>60yrs	19	29.69
Total	**64**	**100**

Minimum age was 34 years and maximum age was 94 years 29.69% population were >60 years age group.

Table 3.3: Distribution of occupation among the non compliant population

Occupation status	Non compliant n=64	Percent
Service	3	4.69
Self employed	1	1.56
Un employed	60	93.75
Total	**64**	**100**

Among the non compliant population 93.75 % were unemployed(housewife),1.56 %were self employed, 4.69% were in service

Table 3.4: distribution of educational status among the non compliant population

Educational status	Non compliant	Percent
Graduate	1	1.56
HSC	7	10.94
SSC	3	4.69
Below SSC	24	37.50
Illiterate	29	5.31
Total	**64**	**100**

Table shows non compliance is inversely proportional to educational level; 45.31% of the non compliant people have no education only 1.56% populations were graduate.

Table 3.5: Socio economic status of the non compliance population

Socio economic status	Non compliant n=64	Percent
Low income (<5000tk.)	2	3.13
Upper middle income (>20000tk.)	16	25
Middle income(5000-20000tk.)	46	71.87
Total	**64**	**100**

(Ref. state of the children of the world 2007,UNICEF)

Table shows 3.13% of the non compliant people were poor and earning >5000taka,71.87% people were middle income and earning 5000 to 20000 taka.

Table 3.6: Distribution of non compliant according to counseling about disease and medication

Counseling	Non compliant n=64	Percent
Yes	23	35.94
No	41	64.06
Total	**64**	**100**

Counseling not done in majority of the non compliant patients.

Table 3.7: Distribution of non compliant according to firstly prescribed drugs.

Types of drugs	Non compliant	Percent
Beta blocker	28	43.75
ACEI	2	3.13
ARB	21	32.81
Calcium channel blocker	11	17.19
Diuretics	2	3.13
Total	**64**	**100**

The most commonly prescribed antihypertensive drugs were beta blocker(43.75%).53.13% of non compliant population were advised to take relatively costly antihypertensive drugs(CCB,ACEI,ARB).

Table 3.8: Reason of non compliance to medication (n=64)

Cause	Non compliant	Percent
Lack of knowledge	7	10.94
Poor financial condition	11	17.19
Switch to herbal medicine	2	3.13
Drugs adverse effect	6	9.38
Development of complication	5	7.81
Misconception to antihypertensive drugs	20	31.25
Others	13	20.31
Total	**64**	**100**

The main reason for not taking medication was misconception to antihypertensive drugs (31.25%),the economic reason for non compliance was only 17.19%.

Discussion:

In this study about 64%of the patients were non compliant to treatment and 36% were compliant to their treatment. The hospital based study where the non compliance rate was 85%.[4] Among the studies conducted on varies population of the world, the compliance observed reported in a similar study in Malaysia (44.2%),[5] comparable to study in Egypt (74.1%).[6] In this study minimum age of non compliance population was 34 years and maximum age was 90 years. 29.69% non compliant population was >60 years age group. Ekram et al (2008)[7] study showed maximum age group was <60 years. In this series among the non compliant population 93.75% were housewife (unemployed), 4.69% were in service and 1.56% were self employed.45.31% of non compliance people have no education,37.50% below SSC and only 1.56% were graduate. Here only 3.13% non compliant people were poor and earning <5000 taka.71.87% people were in middle income and earning 5000-20000 taka. Only 25% population earning >20000 taka. The result was approximately similar to Ekram et al. study; they reported that 70% non compliant people earning ≤ 10000 taka per month,[4] reflecting hypertension is not a disease of rich. The majority (64.03%) of the non compliance population counseling about disease and medication have not done.In this series most commonly prescribed antihypertensive medication was beta blocker. 53.13% of non compliant population was advised to take relatively costly antihypertensive drug (calcium channel blocker, ACEI, ARB) that may contribute to the high rate of non compliance. Khurshid et al.[8] reported, among the monotherapy category, the varies classes of drugs uses were as follows: beta-blocker (28.8%), diuretics (24.1%), calcium channel blockers (21.8%), ACE inhibitors (18.4%), angiotensin II receptor blockers (5.7%).In my study reasons for not taking the medication included misconception to antihypertensive drug (31.25%) others like forgetfulness, journey (20.31%) and poor financial condition (17.19%). Egan et al. found forgetfulness, adverse effects o drugs and not liking to take medication among the reasons for poor compliance in a nationally representative sample in the united states.[9] more than half of the non compliance patients in Al Mahza et al.[10] study reported forgetfulness and absence of symptoms of hypertension (misconception of hypertensive drug) as reasons for the non compliance. These findings are similar to those of other authors.[10] Negative attitude to drugs, lack of knowledge on effect of non compliance, busy lifestyle and lack of family member's cooperation contributes to forgetfulness. This calls for more focus and care regarding the behavioral aspects of the management of hypertension[11] rather than restricting doctors attention to the choice of one type of drug or another.Baune et al,[12] showed a significant correlation between education and quality of life (QOL) among patients with hypertension in Gaza Strip and hypothesized that educational interventions would be essential in preventing high blood pressures and consequent mortality. Knowledge of hypertension significantly affected adherence in Hasmi et al.[13] study sample. Patients who were aware of the association between certain risk factors for hypertension such as high salt intake, stress and a positive family history, had better adherence compared to those who with poorer knowledge. Studies from the developed world, however indicate no association between patients knowledge and adherence .[14,15]

4.2 CONCLUSION:

Majority of the patients were non compliant to their medication and the important reason behind it is misconception to antihypertensive medication when patient feel no symptoms of no hypertension then they become non adherent to medication. Compliance to medication is directly to the level of the knowledge of the patients regarding healthy life style, importance to compliance to treatment, complication of uncontrolled hypertension, side effects of antihypertensive medicine, family members cooperation etc. so, more attention and care should be given to improve the behavioral aspects of the management of hypertension to improve compliance.

4.3 LIMITATIONS:

This study was not without limitation. The limitation of the studies was as follows:

- This study was conducted in only one centre.
- The sample size was small and study period was short.

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