

Original Article

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A Study On Anti Hypertensive Drug Compliance Among Hypertensive Individuals At Ashok Nagar Urban Area Of Eluru, Andhra Pradesh.

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ABSTRACT:

Background: Hypertension is a chronic condition and has got significant role in the development of coronary heart disease, stroke and other vascular complications. To prevent some of the complications of hypertension regular intake of the prescribed treatment in the form of

medicines (pills) is essential. **Objectives:** 1.To knows about the compliance of medication among hypertensive individuals of urban area of Eluru. 2. To find the demographic variables and other factors association with compliance in the study population. **Materials and**

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Methods: The present community based cross sectional study was conducted at Ashoknagar area of Eluru during the period from June 2013 to August 2013. Medication compliance (adherence) was calculated as the proportion of days covered for filled prescriptions of antihypertensive drugs. A total of 132 individuals were selected from Ashoknagar area of Eluru using simple random method. Importance of the study was explained to the participants and informed consent was taken. Results were analyzed and necessary statistical tests like proportions and chi square tests were applied. **Results:** Out of 132 individuals, no one of already diagnosed individuals in the age group of 20-30 years in our study. Compliance among hypertensive

Introduction:

Hypertension is a chronic problem and has got significant role in coronary heart disease, stroke and other vascular complications. To prevent some of the complications of hypertension regular intake of prescribed treatment in the form of medicines (pills) is essential. A variety of terms are used for outcome measures in quantitative studies of adherence; here we use the WHO definition for adherence and terms used in individual studies according to their own definitions. The WHO definition of adherence is “the extent to

individuals was 74%. Compliance criteria in our study was those who taken medicines regularly 6 days out of 7 days in a week. Compliance was good among female sex and house wives and this association was statistically significant ($P < 0.05$). **Conclusions:** based on the above study results, good compliance was seen among females and also in allopathic system of medicine users. Females were more adherences towards their medication. Good compliance of anti hypertensive drugs reduces the incidence of hypertension associated mortality and morbidity.

Key words: age, sex, occupation, hypertension drugs, system of medicine, treatment compliance.

which a person’s behaviour taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider”^{1,2}.

According to the World Health Organization (WHO), non-communicable diseases accounted for 60.3% of the total deaths in 2005³. Further, 75% of the total deaths due to non-communicable diseases occur in developing countries. Of these, a significant contribution is made by hypertension. Of the total number of

disability-adjusted life years, 3.8% is contributed by hypertension.⁴ Overall, 26.4% (95% confidence interval [CI] 26.0– 26.8%) of the adult population had hypertension in 2000, and 29.2% (28.8– 29.7%) were projected to have this condition by 2025. The prevalence of hypertension in urban India has been reported to be 25% and that in the state of Kerala, where this study was conducted, has been reported as 36.7%.^{5, 6} Blood pressure (BP) of > 140/90 mm of Hg is a major risk factor for cardiovascular, cerebrovascular, and renal complications.

Compliance to antihypertensive drugs was set as the major outcome variable, and it was assessed by asking the subjects to recall the number of doses of antihypertensive medicines they had consumed during the previous week and comparing this number with the number of prescribed doses. The compliance was calculated as a proportion of the total number of dosages of the drugs consumed in the previous week, as recalled by the patient, to the total number of prescribed

doses for the week. The subjects who consumed at least 85% of the prescribed medications during the previous week were considered compliant and those consuming less, as non-compliant. Other variables included in the study were socio-demographic factors, duration and treatment of hypertension, measurement of BP, knowledge about the frequency and dosages of drug, knowledge about the complications of hypertension, history of complications associated with hypertension, history of any adverse effects to the medications, and the presence of any co morbidities.

The study subjects were male and female patients diagnosed with hypertension, aged above 20 years, and receiving antihypertensive medication for at least 1 year. In view of the above co-morbidities with acute and long term complications of hypertension disease and planning to explore the compliance status in our field practice area of ASRAM Medical College designed study and conducted.

Objectives:

1. To know about the compliance of medication among the hypertensive individuals of urban area of Eluru
2. To find the demographic variables and other factors association with compliance in the study population.

Materials and Methods:

The present community based Cross sectional study was conducted at Ashoknagar area of urban field practice area of Alluri Sita Ramaraju Academy of Medical Sciences, Eluru during the period from June 2013 to August 2013. Medication compliance (adherence) was calculated as the proportion of days covered for filled prescriptions of antihypertensive drugs. A total of 132 hypertension diagnosed individuals were

selected from Ashoknagar area of Eluru using simple random method. Compliance criteria in our study was those whose taken medicines regularly 6 days out of 7 days in a week. Importance of the study was explained to the participants and informed consent and institutional ethical committee permission was taken. Results were analyzed and necessary statistical tests like proportions and chi square tests were applied.

Results:

Table-1: Age and sex wise distribution of Hypertensive individuals

Age	Male	Female	Total
30-40 yrs	0	6 (100%)	6 (100%)
40-50 yrs	21 (36.85%)	36 (63.15%)	57 (100%)
50-60 yrs	12 (36.3%)	21 (63.7%)	33 (100%)
>60 yrs	27 (75%)	9 (25%)	36 (100%)
Total	60 (45.5%)	72 (54.5%)	132 (100%)

Out of 132 individuals, males accounting 45.5% and females accounting 54.5%. In our study population, nobody has hypertension in the age group of 20-30 yrs.

Ninety patients (68.2%) were using allopathy system of medicine, majority of them (72.7%) were on beta blockers as anti-hypertensive drugs.

Table-2: Compliance status in study population

Compliance	Number	%
6/7 Days (85.7%)	98	74.2%
5/7 Days (71.4%)	30	22.7%
<5/7 Days (<71.4%)	4	3.1%
Total	132	100%

About 74.2% people were having good compliance.

About 80.6 % females and 66.6% male were having good compliance (p>0.05).

Compliance was good in illiterate people and college education completed people that were 85.9% and 91.66% respectively.

Among shop keeper, farmer and clerical occupation 90.5% compliance was observed. There was statistically significant association between different occupations and compliance of hypertension (P<0.01). Out of 132 study population, compliance was good (84.4%) among allopathic medicine users.

Table-3: Predictors in relation to compliance

	Compliance good (n=98) No (%)	Compliance poor(=34) No (%)	χ^2	p
Sex				
Male	40(66.6%)	20(33.3%)	3.3	0.06
Female	58(80.6%)	14(19.4%)		
*Literacy				
Illiterate	49 (85.96%)	8(14.04%)	12.5,	0.006
Primary school	14(58.34%)	10(41.66%)		
High school	24(61.5%)	15(38.5%)		
College	11(91.66%)	1(8.34%)		
Occupation				
House Wife	49(81.66%)	11(18.33%)	10.9	0.01
Unskilled	16(59.25%)	11(40.75%)		
Skilled	14(58.33%)	10(41.66%)		
Shop keeper, Farmer, Clerical	19(90.5%)	2(9.5%)		
System of Medicine				
Allopathy	76(84.44%)	14(15.55%)	16.5	0.0002
Homoeopathy	12(60%)	08(40%)		
Ayurveda	10(45.45%)	12(54.54%)		

Discussion:

In this study, the compliance to antihypertensive medication was found to be 74.2%. About 22.7% people were taking anti hypertensive drugs 5 days in a week and lastly very few people (3.1%) were taking anti hypertensive drugs, 5days in a week. Similar compliance rates have been reported in studies from developed countries, such as Singapore and Switzerland ^{7, 9}. A compliance of more than 85% has also been reported from a Middle Eastern country. However, an earlier report from India indicated a compliance of only around 60% to antihypertensive medication. The present study revealed a relatively better compliance rate, which is almost comparable to that of some developed areas of the country. This could be attributed to better awareness about hypertension and its management among the health care providers as well as the public in the state that to majority are belongs to low economic status.

This is particularly relevant to this study because around 60% of the subjects were below the poverty line and Health Sciences 8. In the present study about 72.7% people were using beta blockers as a anti hypertensive drug because it is supplied free of cost in all government establishments rather than ACE inhibitors

or angiotensine receptor blockers. In addition to that, out of 132 study population, compliance was good (84.4%) among allopathic medicine users. An Open access peer reviewed E-Journal research Article- Antihypertensive Drug Compliance across Clinic and Community Settings ¹⁰, in Thiruvananthapuram, South India found it difficult to purchase medicines from commercial outlets on a long-term basis. A similar finding was reported from Sudan where 36.8% of the patients cited lack of money to purchase anti hypertensive drugs as the reason for non-compliance ⁸.

Compliance was good in illiterate people and college education completed people that is 85.9% and 91.66% respectively. Noncompliance to antihypertensive drug treatment is a complex issue, which needs to be corrected by the implementation of multifactorial strategies. The recognition and proper understanding of these complexities are expected to facilitate the development of effective solutions. Finally our study conducted among 132 subjects that to in cross sectional study. Our results may not reflect the real situations of Indian scenario, because adherence varies from one geographical area to another area and planning to expand this study as a longitudinal study in future. Compliance to

antihypertensive medication requires proper co-ordination between patients, physicians, and the health care sector. Effective patient education must be multi-

factorial, individualized, and delivered via various methods and settings outside the examining room^{1, 8}.

Conclusions:

Based on the above study results, good compliance (74%) was seen among female individuals and also in allopathic system of medicine users. Good compliance of anti-hypertensive drugs reduces the incidence of hypertension associated mortality and morbidity. All factors need to be synchronized so that adequate compliance and BP control is achieved in the affected population, thereby reducing the morbidity and mortality associated with hypertension.

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