

## “Prevalance, Awarness, Adherence and Associated Risk Factors of Hypertension”

Dr.M.Sravanthi\*Pharm.D,P.Sahitya<sup>1</sup>(Pharm.D),B.Chatrapati<sup>2</sup>(Pharm.D),V.Priyanka<sup>3</sup>(Pharm.D),L.Gagankumar<sup>4</sup>(Pharm.D),

*Department of Pharmacy Practice, Sri Venkateswara College of Pharmacy, Srikakulam.*

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**ABSTRACT:Introduction:** hypertension is a major public burden, in spite of burden most of the people are not aware of its presence, therefore increasing the occurrence of associated complication, particularly in the elderly patient's are noticed. There is a lack of current status of the patient's knowledge, awareness and adherence to the treatment in hypertensive patients. **Objective** of the study is to assess the patient's knowledge, awareness, adherence and risk factor of hypertension in hypertensive patients attending Government General Hospital, Srikakulam.**Methods:** This is a cross sectional descriptive comparative study to assess the Knowledge, awareness, adherence and risk factors of Hypertension in GGH, we assessed 150patients of age group between 20-80 yrs and followed the patients using standard questionnaires. **Conclusion:** The knowledge about hypertension among majority of patients was good but they were unaware of their disease status. The drug compliance among them was found to be poor. Thus conducting health education programmes might help to prevent the complications of hypertension and for good adherence to treatment.

**KEYWORDS:**hypertension, riskfactors, adherence ,knowledge

### I. INTRODUCTION

Hypertension is one of the most common medical disorders globally because of mobility and mortality. It is an important treatable risk factors for cardiovascular events<sup>1,3</sup>. As there is a lack of warning signs and symptoms, hypertension is called as SILENT KILLER which can lead to life threatening condition. It can also cause target organ damage in heart,kidney,eyes and it is responsible for several co-morbidities and concomitant risk for cardiovascular and renal diseases<sup>2</sup>.Several cardiovascular risk factors, both modifiable (including hypertension, diabetes mellitus,

hypercholesterolemia, dyslipidemia, obesity, smoking, sedentary lifestyle, alcohol and stress) and non modifiable(sex, age and personal and family history), contribute to the onset, complications and prognosis of cardiovascular diseases<sup>2</sup>.

Apart from the complications, patient behavior which includes in therapeutic process-attending appointments with physician, purchasing and taking prescribed medications, proper diet management, doing regular exercises can effect the hypertension control. The World Health Organization (WHO) States that there will be adherence with person's behaviour, in taking their medication, in sticking to a diet and/or lifestyle changes, corresponds to a health professional's recommendations (WHO, 2003). Thus, health professionals should pay attention to treatment adherence, with particular relevance in the context of chronic diseases.

The prevalence of hypertension increases with age, based on the latest results of survey in 2008, around 40% of adults are suffering from hypertension, approximately 7.5million people are dying every year due to high blood pressure<sup>5</sup>.

### II. METHODOLOGY:

**Study Design:** Prospective cross-sectional descriptive comparative study.

**Study Population:** 150 cases of patients with hypertension.

**Study Site:** The study was conducted in department of general medicine in Government General Hospital, Srikakulam.

**Study Period:** The study was conducted in a period 6 months.

**Inclusion criteria:**

- Patients of either sex.
- Patients age between 20-80 years.
- Collecting cases only from units MM-I, IIIII, IV & FM-I, II, III, IV and dialysis.

- Considering hypertensive patients with cardiovascular disease, chronic kidney disease and diabetes.
- Alcoholics and non-alcoholics
- Smokers and non-smokers
- Patients or representatives who are willing to give consent.

**Exclusion criteria:**

- Pregnant and lactation women.
- Paediatrics.
- Patients who are not willing to give consent.
- Exclusion of patients below the age of 20 years.
- Excluding the units like ICU, PM, PS, Out-Patient.

**III. STUDY PROCEDURE:**

**Method of data collection** A total of 150 subjects were interviewed and their details were noted in a specially designed data collection form. The data collection form contains information about socio demographic characteristics, questionnaire patient awareness on illness, risk factors, symptoms, complications, adherence related questions life style modifications and management. The awareness was assessed by giving scores based on the answers given by the participants during the interview. The questionnaires were interpreted into local languages, to those who could not understand or read English.

**Research and Ethical Committee Approval**

Institutional research and ethical committee approved the study and issued a letter of permission to conduct the study.

**Statistical Methods**

Descriptive statistical analysis has been carried out in the present study. Mean + Standard deviation (Min-max), one way ANOVA and p value as well as Percentages.

**IV. RESULTS AND DISCUSSION:**

Hypertension remains a challenging medical condition among the non-communicable diseases of ever growing population. Efforts to control HT include increasing public knowledge and awareness about the risks associated with high BP. We conducted this cross-sectional descriptive survey to evaluate the current status of hypertension knowledge, awareness, associated risk factors and adherence in a group of hypertensive patients from a distinct community.

Based on age group we have observed that most of the people of age group 51-65yrs (92 out of 150) accounting up to 61.33% showed greater incidence of hypertension, followed by 11 patients (7.33%) in the age group of 20-35, 31 patients (20.66%) in the age group of 36-50, 16 patients (10.66%) are in the age group of above 65 years. Based on gender Females have higher incidence of HTN i.e., 59.33% when compared to males which is 40.667%. Comorbidities include CVA having 30% patients (45 out of 150), Diabetes having 10% patients (15 out of 150), CKD having 30% patients (45 out of 150) and Others having 25% patients (37 out of 150).

**Table 1: patient's knowledge of hypertension**

| QUESTION                                   | YES | NO  | YES (%) | NO (%) |
|--|-----|-----|---------|--------|
| Knowing normal values of BP as 120/80mmHg  | 79  | 71  | 52.7    | 47.3   |
| Increase in BP > 140/90mmHg called HT      | 57  | 93  | 38.0    | 62.0   |
| HT is a treatable condition                | 87  | 63  | 58.0    | 42.0   |
| Risk of developing HT if there is a family | 22  | 128 | 14.7    | 85.3   |

|                             |    |    |      |      |
|-----------------------------|----|----|------|------|
| history of HT               |    |    |      |      |
| Aging is greater risk of HT | 81 | 69 | 54.0 | 46.0 |

|  |     |     |      |      |
|--|-----|-----|------|------|
| Smoking is a risk factor for HT            | 60  | 90  | 40.0 | 60.0 |
| Eating fatty foods is a risk factor for HT | 48  | 102 | 32.0 | 68.0 |
| Overweight is a risk factor for HT         | 48  | 102 | 32.0 | 68.0 |
| Regular physical exercise reduces          | 69  | 81  | 46.0 | 54.0 |
| More salt consumption increases BP         | 136 | 14  | 90.7 | 9.3  |
| Medication is alone in controlling HT      | 57  | 93  | 38.0 | 62.0 |
| HT can lead to life-threatening condition  | 87  | 63  | 58.0 | 42.0 |

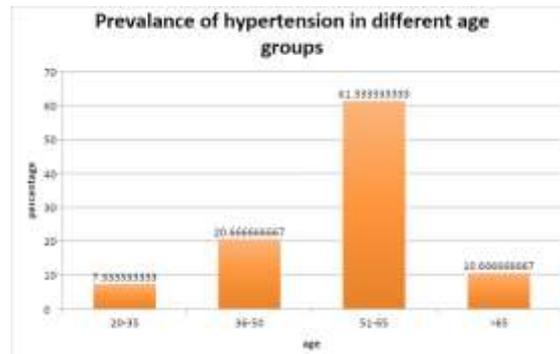


Fig1: prevalence of hypertension in different age groups

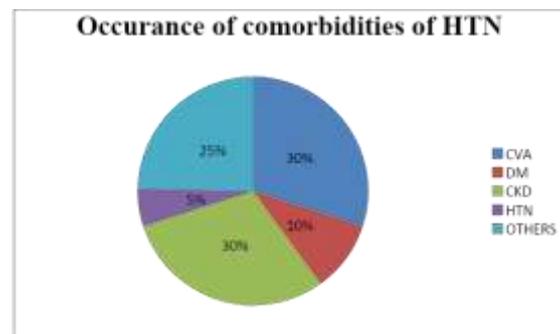


Fig2: occurrence of comorbidities of hypertension

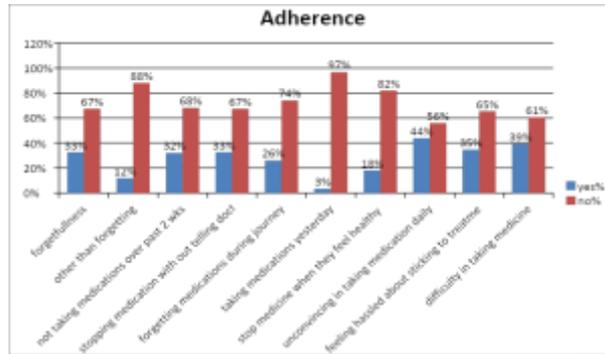


Fig3 :percentage of patients adherence to medication

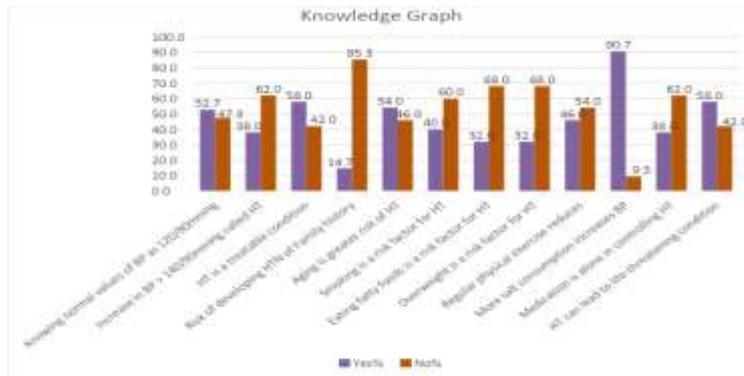


Fig 4 : percentage of patients on knowledge of hypertension

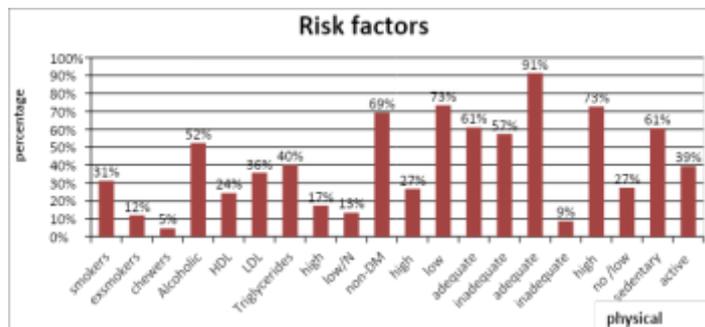


Fig5: knowledge regarding risk factors of hypertension

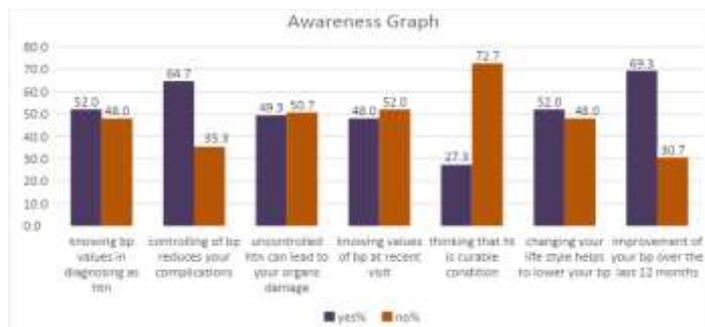


Fig6: Awareness regarding knowledge of hypertension

**AWARENESS STUDY:** shows that 52% of people know their BP values diagnosing as Hypertension at the same time 48% of people don't know that, 64.7% of people state that controlling of BP

reduces their complications whereas 35.3% of people have no awareness on it, 49.3% of people are aware that uncontrolled hypertension can lead to organ damage whereas 50.7% have no awareness on it, 48% of people know their BP values at recent visit whereas 52% of people don't know it, 27.3% of people think that Hypertension is a curable condition and 72.7% of people don't think that Hypertension is a curable condition. 52% of people think that changing their life style helps to lower their BP where as 48% of people believe that changing their life style don't lower their BP. Most of the people i.e., 69.3% stated of improvement of their BP over last 12 months whereas 30.7% of people said that there is no improvement.

**KNOWLEDGE STUDY:**shows that 52.7% of people know that normal value of BP as 120/80mmhg but remaining 47.3% of patients don't know that. 38% of patients know that increase in BP>140/90mmhg called hypertension where as 63% of people stated that they have no knowledge on it. 14.7 % of people conclude that Risk of developing hypertension of family history whereas majority of people i.e., 85.3% haven't heard about it. 54% of people say that aging is a greater risk of Hypertension and 46% of people stated that they have no knowledge on it, 40% of people say that smoking is a greater risk of Hypertension and 60% of people stated that they have no knowledge on it, 32% of people say that eating fatty foods is a risk factor for Hypertension and 68% of people stated that they have no knowledge on it, 32% of people say that overweight is a risk factor for Hypertension and 68% of people stated that they have no knowledge on it, 46% of people said yes when we stated that regular physical exercise reduces Hypertension whereas 54% of remaining patients are unaware of it, Maximum number of people i.e., 90.7% Believe more salt consumption increases BP whereas 9.3 % are unaware of it, 38% of people stated that Medication alone caBP remaining 62% stated that medication alone cannot control BP, 58% of 69 people declare that hypertension can lead to life threatening condition whereas 42% of people don't know about it.

**ADHERENCE ASSESSMENT:**study using morisky questionnaires, on the bases of age and gender and classified into 3 categories named adherent, partially adherent and nonadherent. That study showed that Most of the people (92 out of 150) in age group 51-65 years are adhere to their

medication followed by 20-35 age group 7 people are adherent, 4 people are partially adherent and 0 are non-adherent. In 36-50 age group 21 people are adherent 8 people are partially adherent and 2 people are non-adherent. In 51-65 age group 64 are adherent, 22 are partially adherent 6 are non-adherent, in the age group of people greater than 65 years 5 people are adherent, 7 people are partially adherent and 4 are non-adherent. Assessment based on gender showed that in males 64 are adherent, 17 are partially adherent and 8 are non-adherent to their medication. Whereas in females 33 are adherent, 24 are partially adherent and 12 are non-adherent. Adherence assessment based on Morisky standard questionnaires showed results that 33% of people are non-adherent because they forget taking their medication and 67% are adherent to their medication as they take their medication regularly, 12% of people stated that they have forgot their medication of reason other than forgetting and 88% of people showed adherence by stating that they have no reason of missing medication other than forgetting. 32% of people have not taken medication over past two weeks and 68% of people are on medication over past two weeks. 33% of people stopped medication without telling doctor and 67% of don't stopped medication. 26% of people stopped medication during their journey and 74% of people stick to their medication. 3% of people didn't took their medication yesterday and 97% of people are on medication the before day. 18% of people stopped medication when they feel healthy and remaining 82% continued even they are healthy, 44% of people felt inconvenient during medication and remaining 56% don't feel like that, 35% of people felt hassled about sticking to treatment plan and remaining 65% are following their treatment plan. 39% of people felt difficulty in taking medication and 61% of people sticked to their medication.

**RISK FACTOR ASSESSMENT:**shows Stress is the greater risk factor for hypertension showing 40% of people in males and 32% of people in females affected by it, remaining are followed by 29.33% of people in males and 5.33 % of people in females shown smoking as their risk factor, Alcoholics accounting up to 36.67% in males and 1.33 % in females, 16.67% of male and 10% of females have higher intake of salt, 34% of people in males and 23.33% of people in females take inadequate fruits, 4.67 % of males and 4% of females take inadequate vegetables, 34.67% of people in males and 26% of females are sedentary in physical activity, 10.67% in males and 6.67% in females are diabetic. 70

This prevalence can be reduced gradually through prevention, early detection and proper management<sup>12</sup>. Therefore this study allows us to carry a situational analysis on knowledge, awareness and adherence of hypertensive patients and finding the common risk factor in the hypertensive people followed in primary care in order to plan interventions appropriate to the needs of community. By using this MORISKY MEDICATION ADHERENCE SCALE, we have given scores for each section. The mean score for each section (risk factors, and adherence and knowledge) was calculated based on the total possible score in each; then it was expressed as mean  $\pm$  standard deviation (SD) and then analysis was done by using one-way ANOVA. The P value = 0.001 which is highly significant. It shows that most of the hypertensive patients have more knowledge about disease.

#### V. CONCLUSION:

The knowledge about hypertension among majority of patients was good but they were unaware of their disease status. The drug compliance among them was found to be poor. Thus conducting health education programmes might help to prevent the complications of hypertension and for good adherence to treatment.

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