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**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**Available online at: <http://www.iajps.com>*Research Article***SURVEY ON ANTI-HYPERTENSIVE DRUGS****Indrayani D. Raut\***, Dipak S. Gumate, Tushar Chavan, Swati Chavan

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**Abstract:**

*Hypertension is a major disorder that worsens the quality of life. Newer drugs are being introduced in order to treat the the hypertension. A market survey of various antihypertensive drugs was carried out in the region of Islampur. the objective of the study was to find out the most frequently used drug for the antihypertensive treatment. The study revealed that the sympathoytic drugs were most used drugs followed by calcium channel blockers and AT II receptor antagonists.*

**Keywords:** *Hypertension, survey, Antihypertensive drugs.*

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**INTRODUCTION:**

Hypertension is a major modifiable risk factor for heart disease, stroke, end-stage renal failure, and peripheral vascular disease [1]. Lowering blood pressure (BP) can reduce cardiovascular morbidity and mortality rates and slow the progression of renal disease and overall mortality, as well. Although lifestyle modification is important in hypertension management, most hypertensive individuals require antihypertensive drugs to reduce their BP and maintain it within acceptable ranges. The effectiveness of at least 5 classes of drugs in treating hypertension and preventing cardiovascular events is well documented [1].

Antihypertensives are a class of drugs that are used to treat hypertension (high blood pressure) [2]. Antihypertensive therapy seeks to prevent the complications of high blood pressure, such as stroke and myocardial infarction. Evidence suggests that reduction of the blood pressure by 5 mmHg can decrease the risk of stroke by 34%, of ischaemic heart disease by 21%, and reduce the likelihood of dementia, heart failure, and mortality from cardiovascular disease [3]. Various antihypertensive drugs are classified in more than 10 classes. Among the most important and most widely used drugs are thiazide diuretics, calcium channel blockers, ACE inhibitors, angiotensin II receptor antagonists (ARBs), and beta blockers. The current survey was undertaken to evaluate which drugs are prescribed frequently by the medical practitioners [4, 5].

**PLANNING OF SAMPLING:****Methodology of Survey:**

5 Medical shops in the Islampur were randomly selected. The observer sat in the medical shop for the 6 hours for One day in each shop. The pharmacist was asked to handover the prescription of hypertensive patients to observer. Observer noted down following details.

- 1) Age
- 2) Gender
- 3) Name of drugs (Brand Name and Generic name)

The information so collected was processed as follows-

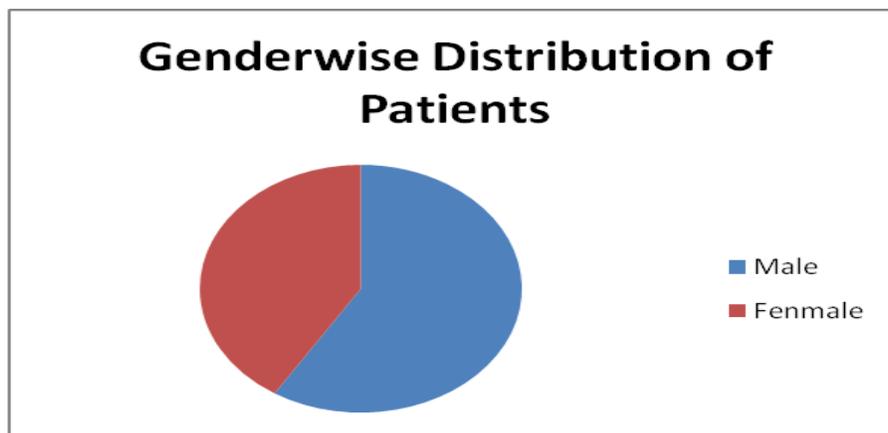
- 1) Age wise distribution of patient.
- 2) Gender wise distribution of patient.
- 3) Classification of drugs.
- 4) Combination of drug.

**RESULTS & DISCUSSION:**

Hypertension has been the leading cause of mortality since many years & rate of mortality due to hypertension is increasing day by day. It also causes worsening the quality of life of people suffering with hypertension. Scientists in the medical field have discovered many new molecules which can be exploited for the treatment of hypertension. The present study was aimed at assessing the pattern of hypertension treatment in the region of Islampur. The prescriptions that came to the pharmacists were assessed In order to study this pattern.

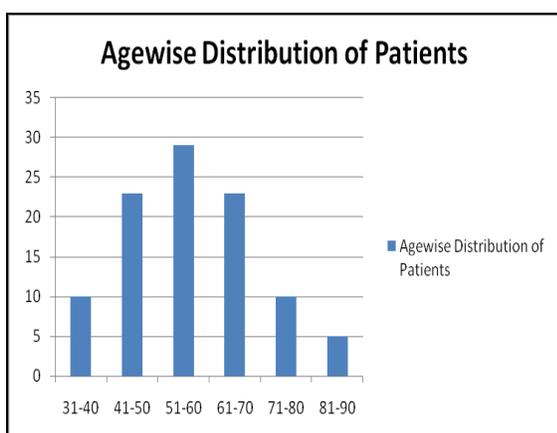
The study revealed that the incidence of hypertension in female was 41 % while the same for males was 59 %.

Gender	No. Patients
Male	59
Female	41



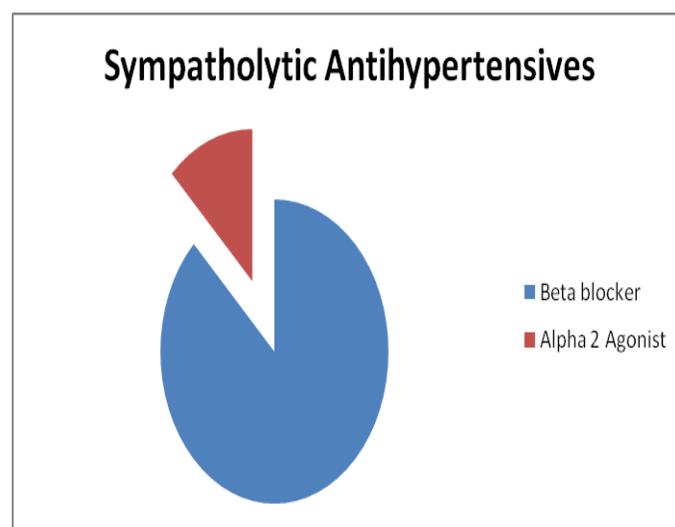
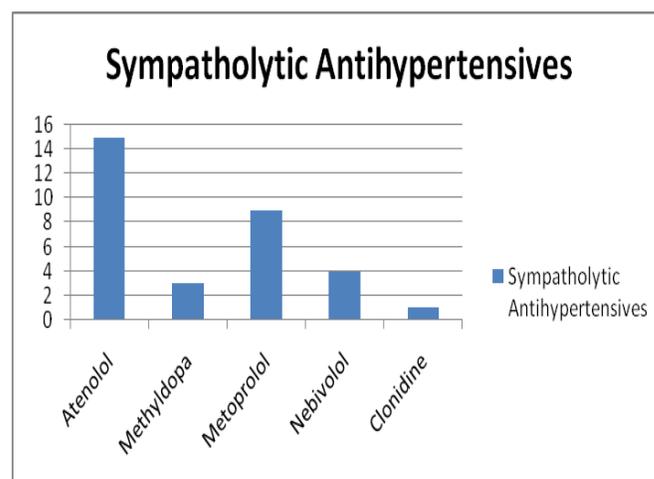
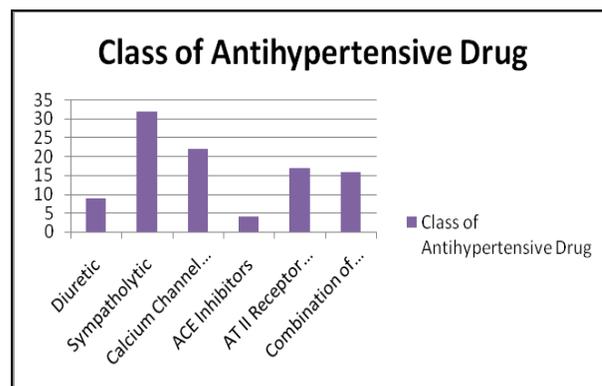
It also showed that the age wise distribution of incidence followed almost normal distribution from the age group 31-40 to 81-90 years with peak incidence in the age group of 51-60 years which is concordant with previous studies made by different scientists.

Age In Years	Number of Patients
31-40	10
41-50	23
51-60	29
61-70	23
71-80	10
81-90	5



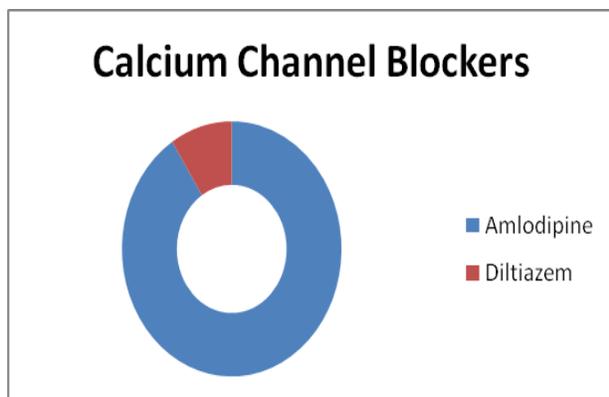
The physicians prescribed for maximum number of time the sympatholytic drugs with a percentage of 32 %. Out of the sympatholytic drugs the beta blockers had a share of 87.5 % while 12.5 % was shared by  $\alpha_2$  agonists like clonidine & methyldopa. Among the cardio selective  $\beta$  blockers atenolol was most prescribed drug. Beta blockers cause retention of sodium and water [6]. Use of beta blockers alone may worsen the hypertension. In spite of that the use of beta blockers is popular.

Class of Antihypertensive Drugs	Number of times prescribed
Diuretic	9
Sympatholytic	32
Calcium Channel Blockers	22
ACE Inhibitors	4
AT II Receptor Blockers	17
Combination of drugs	16



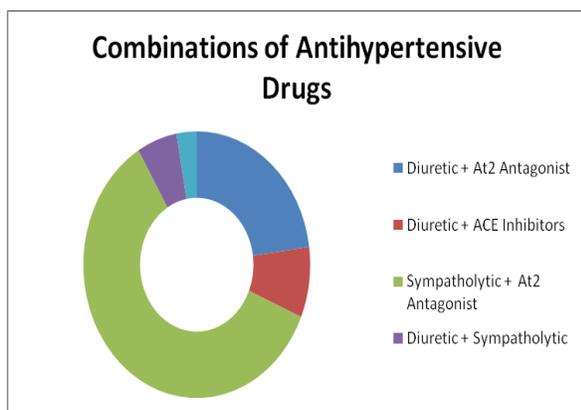
The second most prescribed category was calcium channel blockers & amlodipine was most prescribed calcium channel blocker.

Calcium channel blocker	Number of times prescribed
Amlodipine	20
Diltiazem	2



The combination of two drugs was prescribed for 16 times and the most preferred combination was of a sympatholytic & an Angiotensin<sub>2</sub> receptor antagonist.

Combination Employed	Number of times employed
Diuretic + At <sub>2</sub> Antagonist	8
Diuretic + ACE Inhibitors	3
Sympatholytic + At <sub>2</sub> Antagonist	21
Diuretic + Sympatholytic	2
Sympatholytic + Calcium Channel Blocker	1



### CONCLUSION:

Conclusion of the study was though there have been many new drugs have entered the market the popularity of the earlier drugs still continues and the physicians still rely on the cardiac targeted drugs directly affecting the kinetics & dynamics of heart. But managing the preload & after load with the help of vasodilators & diuretics is still neglected. The report from the panel members appointed to the eighth Joint National Committee recommended the initiation of treatment with a thiazide-type diuretic, calcium channel blocker (CCB), angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) [7]. Research in this area is needed to be carried out so as to assess the comparative performance of the drugs acting on heart & drugs affecting the vasculature.

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