

Anti-Hypertensive Prescribing Patterns and Cost Analysis For Primary Hypertension

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ABSTRACT

Hypertension, additionally named as hypertension, is long haul therapeutic condition which is significant reason for morbidity, mortality and necessities deep rooted treatment prompts inconveniences like stroke, myocardial infarction and chronic kidney infection. Prescribing patterns of the antihypertensive prescription drugs along with the impact of cost on prescribing patterns was analyzed in the present study. A total of 53 prescriptions were analyzed to get the prescribing patterns of ant-hypertensive drugs in the local region of Jalandhar, Punjab. CIMS (Current Index of Medical Cliamis) was used to analyze drugs pharmaco-economically.

Keywords: Anti-hypertensive; pricing regulation; prescription drugs

Introduction

Hypertension is an unsettling influence in hemodynamic capacity in which there is industrious strange height of fundamental circulatory strain, regardless of whether it is diastolic or systolic over the dimension of typical weight of 140/90 mmHg [1]. It is viewed as a quiet executioner. An astounding 9.4 million passings happen worldwide consistently on account of hypertension [1-9]. Government has not yet settled a clear rule for antihypertensive medication treatment. Given the tremendous development in medicinal services used [10-24] and the restricted assets for human services, there is a reasonable need to investigate doctor works on, including solution patterns, in antihypertensive and different treatments [25-27].

Traditionally, circulatory strain was estimated non-intrusively utilizing a mercury-tube

sphygmomanometer, or an aneroid measure, which is still for the most part thought to be the best quality level of exactness for auscultatory readings.[1]

The goals of this examination are to decide antihypertensive medicine remedy examples and time patterns among recently analyzed instances hypertension in India. An extensive variety of antihypertensive medications having a place with various pharmacological classes are accessible, for example, Alpha- adrenergic blockers, Beta Blockers, Angiotensin Converting Enzyme inhibitors, Calcium Channel Blockers, Angiotensin Receptor Blockers, Diuretics focal sympatholytics. Proposals of different master bunches with respect to the selection of medications are accessible as treatment rules to diminish hone inconstancy, cost and enhance sane pharmacotherapy. Execution of these rules has been appeared to be compelling in raising the nature of antihypertensive treatment [5].

1. MATERIALS AND METHODS

A Prospective observational investigation was done for the time of a half year in an out-quiet division of various Superspeciality Hospitals. It is might be 100-50 had relations with Hospital arranged in the core of city at Jalandhar (Punjab). Moral endorsement was gotten from the institutional and healing center board of trustees preceding examination inception. Data gathered from every solution incorporated the name, sexual orientation, age, recorded circulatory strain (both systolic and diastolic), name of medications (nonexclusive and also mark name), measurements, recurrence and sort of treatment (monotherapy, polytherapy and settled dosage mix) and cost of the medications. CIMS (Current Index of Medical Claims) was utilized to gather cost of medications [14].

Table 1. Characteristics of patients

<i>Prescriptions - 53</i>		
<i>Gender</i>	<i>N</i>	<i>%</i>
<i>Male</i>	<i>27</i>	<i>50</i>
<i>Female</i>	<i>26</i>	<i>49</i>
<i>Age</i>		<i>Mean ± SD</i>
<i>Male</i>	<i>57.14 ± 12.58</i>	
<i>Female</i>	<i>51.61 ± 10.79</i>	
<i>Total</i>	<i>55.81 ± 11.72</i>	

<i>Systolic Blood Pressure (SBP)-mm hg</i>		<i>Mean ± SD</i>
<i>Male</i>		<i>159.6 ± 21.79</i>
<i>Female</i>		<i>153.4 ± 15.86</i>
<i>Total</i>		<i>156.1 ± 18.47</i>
<i>Diastolic Blood Pressure(DBP)-mm hg</i>		<i>Mean ± SD</i>
<i>Male</i>		<i>95.4 ± 7.74</i>
<i>Female</i>		<i>92.69 ± 7.53</i>
<i>Total</i>		<i>93.86 ± 7.57</i>
<i>Stage Of Hypertension (JNC 7 Guidelines)</i>	<i>N</i>	<i>%</i>
<i>Normal</i>	<i>10</i>	<i>18</i>
<i>Prehypertension</i>	<i>12</i>	<i>24</i>
<i>Stage 1</i>	<i>15</i>	<i>30</i>
<i>Stage 2</i>	<i>16</i>	<i>32</i>

N = Frequency; % = Percentage

2. RESULTS

Table 1 describes the socioeconomics of the patients. Aggregate of 53 solutions were found to have FDCs, patterns of antihypertensive blend is been delineated in [Table2].

Pharmacoeconomics profile - Medication usage and expenses of various antihypertensive operators brought about every day and every year are spoken to in [Table 3]. Along these lines, the diuretics were most financially savvy (Cost per day: INR 2.89; Cost per year: INR 212.02) in connection to the other antihypertensive endorsed.

Table 2. Percentage of antihypertensive drugs prescription pattern

<i>Prescription Pattern</i>	<i>N</i>	<i>%</i>
<i>Beta blockers</i>		
<i>Atenolol</i>	<i>5</i>	<i>9.43</i>
<i>Metoprolol</i>	<i>2</i>	<i>3.77</i>
<i>Bisoprolol</i>	<i>2</i>	<i>3.77</i>
<i>Carvedilol</i>	<i>1</i>	<i>1.88</i>

CCB		
<i>Amlodipine</i>	13	24.52
<i>Nifedipine</i>	2	3.77
Diuretics		
<i>Hydrochlorothiazide</i>	5	9.43
<i>Furosemide</i>	3	5.66
<i>Spironolactone</i>	2	3.77
ARB		
<i>Losartan</i>	2	3.77
<i>Olmesartan</i>	2	3.77
<i>Telmisartan</i>	2	3.77
ACE-I		
<i>Ramipril</i>	3	5.66
<i>Enalapril</i>	4	7.54
Alpha Blockers		
<i>Prazosin</i>	5	9.43
<i>Total</i>	53	

Table 3. Types of prescribed antihypertensive medications

CLASS	N	CPD(mean) (INR)	CPY(mean) (INR)
<i>Diuretics</i>	10	2.89	212.02
<i>β – blockers</i>	10	3.01	218.23
<i>CCB</i>	15	6.02	329.32
<i>ARB</i>	6	7.23	374.54
<i>ACE-I</i>	7	8.01	378.41
<i>α –blockers</i>	5	10.08	477.05

3. CONCLUSION

Our review cross-sectional examination broke down the medicine example of antihypertensive medications and discovered that the endorsing design was not absolutely steady with the JNC VII rules for the treatment of hypertension. Hypertension is a haemodynamic issue, related with an

ascent in fringe vascular obstruction, that can, thusly, prompt myocardial dead tissue, renal disappointment, strokes and demise, if not identified early what's more, treated effectively. Rules utilized in the finding and administration of hypertension incorporate the JNC 7 and JNC 8, the South African Standard Treatment Guidelines, Essential Medicines Rundown and the South African hypertension rules. As a major aspect of the stepwise treatment in the administration of hypertension, thiazide- type diuretics are as yet viewed as the underlying first venture, with an antihypertensive medication added by the hazard profile of the quiet and additionally the reaction to treatment.

The proceeded with difficulties in the administration of hypertension still need exceptional consideration. Various national and universal rules for the administration of hypertension have been distributed featuring mono-or mix treatment as indicated by the BP levels and related comorbidity. Around the world, hypertension treatment methodologies have differed broadly after some time regarding beginning medication of decision from diuretic to ACEI/ARB/CCB. The assessment design, tolerant adherence to the treatment, doctor adherence to hypertension administration rules, cost suggestions and other information concerning comorbid conditions have been investigated in numerous clinical examinations. In spite of these information and distributed rules, irregularities exist towards treatment approach, as a result of which doctors once in a while need to individualize the treatment, in view of particular patient attributes and reaction to treatment. In creating nations like India, more deliberate examinations are required on the assessment of endorsing examples and rule based antihypertensive drugs' utilization, which can be customized to suit the patients' necessities.

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