

Analysis of Antihypertension Drug Prescription in Bpjs Patients at Amaluna Pharmacy Bukittinggi City In 2022

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Abstract

Hypertension is a disease that requires long-term treatment, using antihypertensive drugs. Hypertension is still one of the diseases whose prevalence always increases. This study aims to determine the percentage of prescribing the use of antihypertensive drugs, as well as to determine the types of drugs and classes that are often prescribed to BPJS patients. The research method uses a retrospective method which was carried out at the Amaluna Pharmacy, Bukittinggi City from January to December 2022. The instrument used was a prescription sheet for hypertension patients. The sample was selected using a purposive sampling technique. The number of samples that met the inclusion criteria was 177 patients. The results showed that the highest number of BPJS hypertensive patients were women with 90 patients (50.85%) while men, had 87 patients (49.15%). In terms of age, most hypertensive patients were over 60 years old, with 108 patients (61.02%). In the most prescribed antihypertensive drugs, the Calcium Antagonist (CCB) group was 87% and the hypertension drug that was often used was Amlodipine 5 mg.

Keywords: Hypertension, BPJS, Pharmacy, Prescription

1. Introduction

Based on Law no. 36 of 2009 states that health is a state of good physical, mental, spiritual, or social well-being that enables everyone to live productively both economically and socially. (UU RI, 2009). Health is very important for all humans, through a healthy body, humans will be able to carry out various activities properly. However, in this day and age, most people have changed their lifestyles to become instantaneous and practical, including the issue of food (Mambela, 2020). At this time, humans are more likely to choose fast food, eat excessive portions, lack exercise, smoking habits, and lack rest. These habits trigger and cause various chronic diseases, including hypertension (Petersen et al., 2020).

Hypertension or high blood pressure is a condition in which blood pressure increases beyond the normal limit of 120/80 mmHg (Arifin & Mustofa, 2021). The World Health Organization (WHO) has determined that the normal limit for blood pressure is below 135/85 mmHg. If a person's blood pressure exceeds 140/90 mmHg, it is considered to be in the high blood category (World Health Organization, 2019).

Hypertension is a type of disease that gets serious attention from all levels of society because this disease can cause various impacts, both in the short and long term. (DEHIMELI, 2018). WHO in 2015 stated that approximately 1.13 billion people in the world suffer from high blood pressure. This means that one in three of the world's population is diagnosed with high blood pressure. This is also corroborated by data released by the Institute for Health Metrics and Evaluation (IHME) which states

that 33.1% of deaths in the world in 2017 were caused by hypertension. (P2PTM Kemenkes, 2020).

Basic Health Research (Riskesdas) research data in 2018, showed an increase in the prevalence rate of high blood pressure among Indonesians aged 18 years or over to 34.1% from only 25.8% in 2013. The highest case of 44.1% was in South Kalimantan, while the lowest was 22.2% in Papua (Kementerian Kesehatan RI, 2018).

In West Sumatra Province itself, the prevalence rate of hypertension aged 18 years and over is at 25.16% where 13.2% occurs at the age of 18-24 years, 20.1% at the age of 25-34 years, 31.6% in aged 35-44 years. The 2018 Riskesdas results show that the prevalence rate for hypertension is still quite high. Every city and district in West Sumatra has patients with hypertension, one of which is the city of Bukittinggi, which occupies the fourth position with the highest prevalence of hypertension with a prevalence rate of 31.2%. (Sugihantono, 2019).

Detect hypertension can be done by way of in-depth examination. For some sufferers, hypertension is no longer just a chronic complaint, but a way of life and continues to depend on drugs. Hypertension sufferers should routinely carry out self-examination at a doctor or hospital to be able to control their blood pressure. Hypertension patients are also expected to comply with medical instructions and manage a better lifestyle. (Petersen et al., 2020).

Handling hypertension requires a long time and it is even possible that the patient will take medication throughout his life. Treatment of high blood pressure is primarily aimed at preventing complications by controlling blood pressure so that it remains stable under normal conditions. In addition, the treatment of hypertension requires a lot of money because of

the long treatment period. The amount of medical expenses is an interesting thing because in the future, therefore the application of pharmacoeconomic principles to drug use is very important (Meila & Rahayu, 2020).

The Indonesian government has created a special program in the health sector, namely the National Health Insurance (JKN) program which is a form of reform in the health sector to solve problems related to public health which makes health financing and service quality uncontrollable. The agency formed to administer the JKN Program in Indonesia is the Health Social Security Agency (BPJS). (Wijayani, 2018).

At the Amaluna Pharmacy, Bukittinggi City, there is a general practitioner practice, namely dr. Sari Nismala Dewi who serves non-BPJS patients and patients with BPJS. Amaluna Pharmacy is registered as an FKTP (First Level Health Facility) which collaborates with BPJS Kesehatan, where BPJS patients with hypertension are more than non-BPJS patients with hypertension. At the Amaluna Pharmacy, Bukittinggi City, high blood pressure is the second most common disease in 2021. Management of hypertension can be done through the use of drugs to achieve quality health, patients who have consulted a doctor will get a prescription to be redeemed at the Pharmacy. The total number of prescriptions for BPJS patients registered at the Amaluna Pharmacy FKTP for 2021 is around 40 recipes per day, with 3-5 prescriptions for antihypertensive therapy every day.

Based on the description above, it is necessary to analyze the prescription of antihypertensive drugs for BPJS patients at the Amaluna pharmacy in Bukittinggi City in 2021. This study aims to find out more about the types of antihypertensive drugs that many doctors prescribe to BPJS patients at the Amaluna Pharmacy, Bukittinggi City.

2. Research Methods

Data collection was carried out using a retrospective approach, namely through checking again and then collecting and recording hypertension patient prescriptions for BPJS patients from January to December 2021 at the Amaluna Pharmacy, Bukittinggi City. The sample used in this study is BPJS prescriptions for patients with hypertension at the Amaluna Pharmacy, Bukittinggi city from January to December 2021 who meet the inclusion criteria, namely:

1. Patients who received antihypertensive drug prescriptions prescribed by doctors at the FKTP Amaluna Pharmacy Bukittinggi.
2. Hypertensive patients with BPJS health

insurance who are registered at the FKTP at the Amaluna Pharmacy Bukittinggi.

3. Prescription for hypertension patients from January to December 2021
4. Hypertensive patients who are in the adult age category are 18 years old.
5. Hypertensive patients with BPJS who seek treatment for more than 1 visit.

Exclusion Criteria

1. Hypertensive patients who do not use BPJS health insurance
2. Hypertensive patients with BPJS with 1 visit
3. Hypertensive patients with pregnancy
4. Unreadable recipe
5. Torn recipe

The research sample was determined using a purposive sampling technique using the Slovin formula. Slovin proposes a sampling method with the following formula (Hidayat, 2017).

$$n = \frac{N}{1 + N(e)^2}$$

- n* : sample size / number of samples
- N* : the number of N elements or members of the population = 316
- e* : error level = 0,05 (5%)

Data analysis techniqu

Here the data analysis technique uses descriptive analysis (describing), which is a method used to describe or analyze a phenomenon that exists in the form of words or narratives, symbols, and pictures, so it does not require calculating numbers in concluding. (*metode penelitian kuantitatif, kualitatif, dan R&D*, 2016).

The data that has been calculated is then analyzed by calculating the percentage of drug use, calculating the percentage of hypertension patients based on gender, age, name, and class of antihypertensive drugs in BPJS patients at the Amaluna Pharmacy Bukittinggi..

3. Results and Discussion

Based on research conducted from December 2021 to March 2022, the use of antihypertensive drugs in BPJS patients at the Amaluna Pharmacy, Bukittinggi City, was obtained as follows:

Based on gender and age

Here the age used is the division of the adult age which is divided into three age range groups namely young adults (18-40 years), middle adults (41-65 years), old adults (60 years and over) (Hurlock, 1991). As shown in table 1:

Gender			Age		
	Amount	Percentage	age range	Amount	Percentage
Male	87	49.15%	18-40 years	6	3.39%
Female	90	50.85%	41-60 years	63	35.59%
			> 60 years	108	61.02%
	177	100%		177	100%

2. Based on the name of the antihypertensive drug and the class of antihypertensive drug

Antihypertensive therapy aims to reduce or eliminate the risks posed by hypertension without reducing the quality of life. Based on the table 2, the administration of antihypertensive therapy received is a diuretic, ACEI, and CCB group.

Table 2 Number and Percentage of BPJS Patients with Hypertension Based on Antihypertensive Drug Names and Groups at Amaluna Pharmacy, Bukittinggi City						
Antihypertensive group	Amount	Percentage	Antihypertensive Drugs	Amount	Percentage	Information
Diuretik	5	2.82%	Furosemide	5	2.82%	
ACE Inhibitor	18	10.17%	Lisinopril 5 mg	2	1.13%	
			Captopril 25 mg	16	9.04%	
Calcium Chanel Blocker	154	87%	Amlodipin 5 mg	86	48.59%	
			Amlodipin 10 mg	68	38.42%	
Beta Blocker			-	-	-	Nothing is prescribed
Angiotensin Receptor Blockers			-	-	-	Nothing is prescribed
Number of Samples	177	100%		177	100%	

Based on observations of the percentages obtained regarding the Analysis of Prescribing Antihypertensive Drugs in BPJS Patients at the Amaluna Pharmacy, Bukittinggi City, as many as 177 samples for the period January 2020 to December 2021, several conclusions can be discussed, including:

Based on Gender

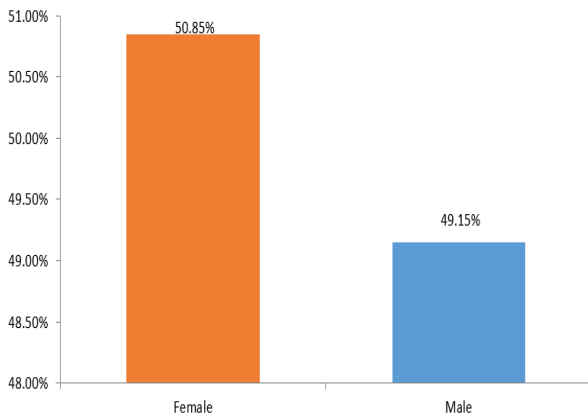


Figure 1. Diagram of the Percentage of Hypertension Patients with BPJS Patients at Amaluna Pharmacy, Bukittinggi City based on Gender

There is a difference in the number of female patients with male patients with hypertension, namely the prevalence of female with hypertension is greater, namely 50.85% than male. The large prevalence of high blood pressure in women often occurs after reaching the menopause stage which is caused by the cessation of endogenous estrogen production which makes the body unable to maintain vasodilation which can control blood pressure. (Ardhany et al., 2018).

Risk factors for women to experience high blood pressure besides being due to gender, age, and genetics are also due to the use of contraception which contains the hormones progesterone and estrogen.. Increased blood pressure is caused by experiencing cardiac hypertrophy and increased angiotensin II pressure response by involving the

renin Angiotensin System pathway.

Based on Age

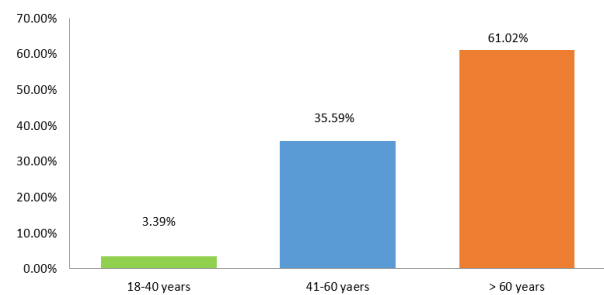


Figure 2. Diagram of the Percentage of Hypertension Patients with BPJS Patients at the Amaluna Pharmacy, Bukittinggi City based on Age

The diagram above shows samples taken from January to December 2021, the most patients were patients aged over 60 years with a total of 108 patients (61.01%), this is due to an increase in blood pressure with age, the occurrence of leaks in large blood vessel valves, and blood vessels that tend to harden or stiffen with age. Hardening of the arteries makes the heart have to work harder, this makes blood pressure in the elderly higher. In addition, this is also due to the fact that with age the function of human organs is getting weaker and more susceptible to disease (Aristoteles, 2018).

Based on Prescribed Antihypertensive Drugs

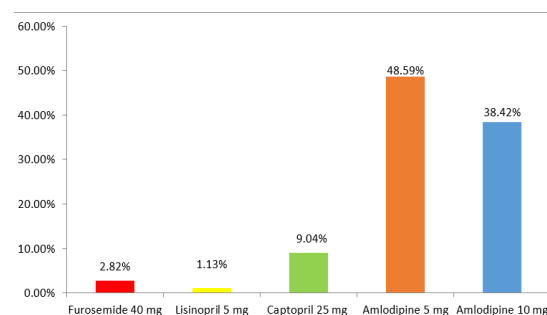


Figure 3. Diagram of the Percentage of Hypertension Patients with BPJS Patients at Amaluna Pharmacy, Bukittinggi City Based on Antihypertensive Drugs

For the administration of hypertension drugs at the Amaluna Pharmacy in Bukittinggi City from January to December 2021, Amlodipine was the most common drug, with a total of 5 mg amlodipine + 10 mg amlodipine reaching 87.01% compared to other hypertension drugs such as Furosemide, lisinopril and captopril. Amlodipine has advantages over other hypertension drugs, because it has efficiency in administration, which is only needed once a day. The decrease in blood pressure occurs slowly and the level of absorption is perfect by the body, especially for people who are elderly. In addition, the drug Captopril also has a side effect, namely causing a dry cough. The administration of this drug has also been considered according to the patient's needs related to the availability of existing drugs and the effectiveness of reducing systolic and diastolic blood pressure by Amlodipine is higher than captopril. (Taslim & Betris, 2020).

Based on Antihypertensive Drug Class

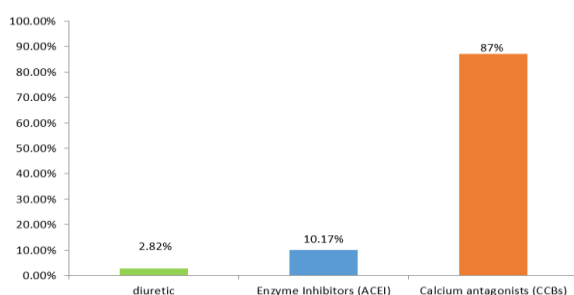


Figure 4. Diagram of the Percentage of Hypertension Patients with BPJS Patients at Amaluna Pharmacy, Bukittinggi City Based on Antihypertensive Drug Classes

The diagram above shows that the most commonly prescribed antihypertensive group for BPJS patients at the Amaluna Pharmacy in Bukittinggi City is the Calcium Channel Blocker (CCB) group with a percentage of 87%. This group inhibits the process of transfer of calcium to the cardiac muscle cells and smooth muscle of the blood vessel walls and reduces peripheral resistance and reduces blood pressure. This class of drugs has effectiveness in efforts to reduce blood pressure, how it works directly on the blood vessels to cause relaxation, and is included as the first line of treatment for high blood pressure. Angiotensin-converting enzyme inhibitors (ACEi) are the most common group after the CCB group, this group competitively inhibits the formation of angiotensin II from inactive angiotensin I precursors found in the brain, adrenal glands, heart, kidneys, blood vessels, and blood. ACEi and CCB are the first lines of treatment for high blood pressure (Lisni et al., 2020).

4. Conclusion

Based on the results of the research that the researchers conducted regarding the analysis of the use of antihypertensive drugs in BPJS patients at the Amaluna Pharmacy, Bukittinggi city from January to December 2021, the following conclusions can be drawn:

1. Analysis of BPJS participant patients with hypertension who are treated at the Amaluna Pharmacy in Bukittinggi are male patients 49.15%, the most are female patients with a percentage of 50.85% and aged 60 years and over are the most patients who receive prescribing antihypertensive drugs with a percentage of 61.02%..

2. The most commonly prescribed class of antihypertensive drugs to BPJS patients at the Amaluna Pharmacy in Bukittinggi is the Calcium Channel Blocker group with a percentage of 87% with the type of drug prescribed, namely amlodipine 5 mg as much as 48.59%..

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