

Overview of Medication Administration to Hypertension Patients at Harapan Raya Community Health Center

Sinata Novia¹, Daniarti Tri², Hidayah Nurul³, Khairani Putri⁴, Rizki Asrina Rahmi⁵, Juliati Ranti⁶, Sari Mayang Rapi⁷

^{1,2}Program Studi Farmasi, Sekolah Tinggi Ilmu Farmasi Riau, Indonesia

³⁻⁷Program Studi Profesi Apoteker, Sekolah Tinggi Ilmu Farmasi Riau, Indonesia

E-mail : rahmiasrina@stifar-riau.ac.id

Abstract

Hypertension or high blood pressure is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg in two measurements with an interval of five minutes in a state of sufficient rest/calm. This research is a descriptive observational study. The research was conducted at Harapan Raya Community Health Center in April 2024. The sample in this study was hypertension patients who received treatment at Harapan Raya Community Health Center in March 2024. The instrument used in this research was secondary data from the monthly report of Harapan Raya Community Health Center in March 2024. The data used obtained and then analyzed by calculating the percentage of drug use. Based on the results at the Harapan Raya Community Health Center, it can be concluded that: Patients who consume a lot of hypertension medication are female with 75 respondents and 39 male respondents. The highest number of patients who took hypertension medication were in the elderly age range, with 68 respondents, 44 respondents for middle adults, and 2 respondents for early adults. The drug that is often used in community health centers is amlodipine 10 mg.

Keywords: Hypertension; Gender; Age;

INTRODUCTION

Hypertension or high blood pressure is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg in two measurements with an interval of five minutes in a state of sufficient rest/calm. An increase in blood pressure that lasts for a long time (persistent) can cause damage to the kidneys (kidney failure), heart (coronary heart disease) and brain (cause) if it is not detected early and receives adequate treatment (Ministry of Health of the Republic of Indonesia, 2013).

Hypertension is still a big challenge in Indonesia. Why not, hypertension is a condition that is often found in primary health care. This is a health problem with a high prevalence. The prevalence of hypertension in Indonesia obtained through measurements in the age group ≥ 18 years is 25.8%. The prevalence of hypertension in each province in Indonesia in the age group ≥ 18 years is quite high. For example, the prevalence of hypertension in several provinces, including Bangka Belitung, South Kalimantan, East Kalimantan and West Java, in 2013 averaged above 29.4%. Meanwhile, the prevalence of hypertension in the age group ≥ 18 years in Central Java in 2013 was 26.4%. If Indonesia's

population is 252,124,458 people, there are 65,048,110 people who suffer from hypertension. A condition that is quite surprising. There are 13 provinces whose percentage exceeds the national figure, with the highest being Bangka Belitung Province (30.9%) or in absolute terms $30.9\% \times 1,380,762 \text{ people} = 426,655 \text{ people}$ (Ministry of Health of the Republic of Indonesia, 2014). Data from the World Health Organization (WHO, 2015) shows that around 1.13 billion people in the world are affected by hypertension, which means that 1 in 3 people in the world are diagnosed with hypertension. The prevalence of hypertension will continue to increase, it is estimated that by 2025, around 29% of adults worldwide will suffer from hypertension. Hypertension causes the deaths of around 8 million people every year, 1.5 million deaths occur in Southeast Asia, where one third of the population suffers from hypertension (Ministry of Health of the Republic of Indonesia, 2013).

Treatment of hypertension is usually indicated to prevent morbidity and mortality due to hypertension. The choice of medication for each hypertensive sufferer depends on the metabolic and subjective side effects that arise, the presence of other diseases that may be

improved or worsened by the selected antihypertensive, the administration of other medications that may interact with the chosen one, the administration of other medications that may interact with the selected antihypertensive given (Ikawati, dd., 2008).

METHOD

This research is descriptive observational research. The research was

carried out at the Harapan Raya Community Health Center in April 2024. The sample in this study was hypertension patients who received treatment at the Harapan Raya Community Health Center in March 2024. The instrument used in this research was secondary data from the monthly report of the Harapan Raya Community Health Center in March 2024. The data obtained and then analyzed by calculating the percentage of drug use.

RESULTS AND DISCUSSION

Results

Table 1. Number and Percentage Based on Gender

No	Gender	Amount	Percentage
1	Woman	75	66%
2	Man	39	34%
Total		114	100%

Table 2. Numbers and Percentages Based on Age Range

No	Age	Amount	Percentage
1	Early Adulthood	2	2%
2	Adult Associate	44	39%
3	Advanced Adulthood	68	60%
Total		114	100%

Table 3. Number and Percentage of Hypertension Medication Use at Harapan Community Health Center
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No	Drug Name	Number of Recipes	Percentage
1	Bisoprolol 5 mg	1	1%
2	Captopril 12,5 mg	1	1%
3	Captopril 25 mg	1	1%
4	Amlodipine 5 mg	45	39%
4	Amlodipine 10 mg	65	57%
5	Furosemid 20 mg	1	1%
TOTAL		114	100%

Discussion

Based on the 2019 national formulary, hypertension drugs approved for administration in level I health facilities include Amlodipine, Atenolol, Hydrochlorothiazide, Captopril, Chlortalidone, Lisinopril, Furosemide and Spironolactone. The types of hypertension drugs available at the Harapan Raya 2024

health center are Amlodipine 5 mg, Amlodipine 10 mg, Captopril 12.5 mg, Captopril 25 mg, Bisoprolol 5 mg, Furosemide 20 mg.

The results of this study showed that the hypertension drug that was frequently prescribed at Harapan Raya Community Health Center was Amlodipine 10 mg, with 65 prescriptions with a percentage of 57%. This is

also supported by research from Azizah and Aziez (2021) which states that Amlodipine is most widely used in the treatment of single dose hypertension because it is most effective in reducing or stabilizing blood pressure. Amlodipine has advantages compared to other hypertension drugs because it is efficient in use, namely once a day. And amlodipine is also a first-line drug for patients suffering from hypertension.

For captopril, hydrochlorothiazide, furosemide, and bisoprolol only a few were given because there were not many drugs other than amlodipine 10 mg in stock. Apart from that, captopril is rarely prescribed because the side effect of captopril is dry cough. Medication administration has also been considered according to the patient's needs. Baharudin's (2013) research results showed that the comparison of the effectiveness of reducing systolic and diastolic blood pressure by amlodipine was higher than captopril, whereas there was no significant difference between hydrochlorothiazide and captopril and hydrochlorothiazide and amlodipine. Amlodipine is a calcium antagonist drug for all types of hypertensions with a working mechanism of inhibiting calcium ions which cause blood pressure. These calcium ions are very important for the formation of bones and smooth muscle of the heart. Due to stimulation, calcium ions that are outside the cells will enter the cells, so that there are more calcium ions in the cells, then the heart muscle contracts and the arteries shrink, resulting in blood pressure. increasing (Tjay and Rahardja, 2007).

Based on the research results obtained from table 3 which states that the number and percentage of respondents based on gender in this study was 114, where the largest number were female patients with a total of 75 respondents with a percentage of 66% and for men there were 39 respondents with a percentage of 34%. Based on the data above, it is known that the most common hypertension patients are women, namely 66%. Because women experiencing menopause is one of the factors that causes women to have a higher incidence of

hypertension than men. This statement is supported by research conducted by Wahyuni and Eksanoto (2013) that women will experience an increased risk of hypertension after menopause, namely over 45 years of age. This is in line with the results of research by Annindiya (2012) which states that the number of women suffering from hypertension is greater than men. This is because women experience menopause, in which case hormonal changes occur, namely a decrease in the ratio of estrogen and androgen which causes an increase in the release of renin, which can trigger an increase in blood pressure.

Based on the research results obtained from table 2, it shows data about the number and percentage of respondents based on age range. Based on the results obtained for the number and percentage of respondents based on age range, the percentage for early adults was 2% with 2 respondents, for middle adults it was 39% with 44 respondents and for older adults it was 60% with 68 respondents. So, the highest lifting results were obtained in patients who were in the advanced adult range, namely 60 years and above.

Supported by Kowalski (2010), elderly people often experience structural and functional damage to the aorta, namely the large artery that carries blood from the heart, which causes increasingly severe displacement of the blood vessels and higher blood pressure. In the elderly, the condition of hypertension caused by external stressors will be further exacerbated by the condition of the elderly's blood vessels which cannot compensate for high blood pressure due to aging where the blood vessels become stiffer. Apart from that, high blood pressure will also be worsened by neurohormonal changes in the elderly and kidney aging. The kidneys are organs that also play a role in regulating compensation if there is an increase or decrease in blood pressure. Neurohormonal changes occur with increasing age, such as a decrease in the hormone estrogen in women, a decrease in plasma renin activity of 40-60% and aldosterone, as well as increased activity of the sympathetic nervous system which triggers an increase in blood

pressure. So all the factors above will worsen high blood pressure (Ministry of Health of the Republic of Indonesia, 2022).

CONCLUSIONS AND SUGGESTIONS

Based on the results obtained, it can be concluded that female patients consume more hypertension medication than male patients with 75 female respondents and 39 male respondents. Apart from that, based on age, elderly patients consume more hypertension medication with 68 respondents compared to middle adult patients with 44 respondents and early adults with 2 respondents and amlodipine is the most frequently prescribed medication at the Harapan Raya Community Health Center.

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