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Submitted: June 1, 2024

Accepted: June 16, 2024

To cite: Paudel S, Adhikari S. Cost-effectiveness of antihypertensive drugs: A factor for clinical decision making. JGMC Nepal. 2024;17(1):6-8.

DOI: 10.3126/jgmcn.v17i1.66835

Cost-effectiveness of antihypertensives: A major factor for clinical decision making

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ABSTRACT

The cost study of antihypertensive therapy is essential because hypertension is one of the major chronic illnesses causing economic burden to the patients. The expense associated with chronic illnesses like hypertension raises concerns because patients often need long-term medication, often requiring multiple drugs simultaneously. The cost-effectiveness analyses of antihypertensive medications are necessary to determine the most economical treatment options. Since protocols and circumstances vary across settings, such analyses must be conducted to ensure applicability in diverse scenarios.

Keywords: Antihypertensives, cost-effectiveness, hypertension.

Hypertension is one of the chronic diseases with high morbidity and mortality. The incidence and prevalence of the disease is high. In addition, hypertension is an independent risk factor for other costly diseases. The mortality due to stroke and cardiovascular complications such as ischemic heart disease is high, so early treatment is essential.¹ Antihypertensive (AH) therapy reduces the incidence of stroke (35% to 40%), myocardial infarction (20% to 25%), and heart failure (>50%).²

The cost of chronic diseases such as hypertension is of concern as the patient consumes medication for a long time and the number of drugs most of the time is more than one.³⁻⁵ Also, these medications bear a huge amount of health care expenditure of the country. The cost of AH therapy has been presented from other settings⁶⁻¹¹ and the evidence from our context is significant to advocate better treatment. The comparison of the value of one drug or drug therapy to another as well as the costs of individual therapy is studied in the field of Pharmacoeconomics.⁸

The first-choice drug groups as per Joint National Committee guideline VIII are angiotensin receptor blockers (ARB), angiotensin-converting enzyme inhibitors (ACEI), calcium channel blockers (CCB), and diuretics. The target blood pressure for the population more than 50 years of age is <150/90 mmHg and for the population less than 50 years is <140/90 mmHg.¹² The first-line drugs, usually two of them are combined as fixed-dose combinations have the advantage of improving patient compliance and less expensive.¹³

Cost analysis is to be done for appropriate and rational treatment. As per the study conducted in India, diuretics is the cost-effective choice, but it is the least prescribed one. Diuretics is as effective as other drug groups. However, the tendency of physicians is to prescribe other costly medications.¹⁴ The guideline is not followed in many of the prescriptions. As depicted in several literatures of pharmacoeconomics, the direct medical cost bears the highest amount of cost in the treatment of chronic illnesses.¹⁵⁻¹⁷ The results of a hospital-based

study to demonstrate the cost effectiveness of the first line antihypertensive therapy was presented in a study by same authors where the majority of the expenditures of medication, laboratory testing, consultation fees, and supplies were paid out of pocket by the patients, which accounted for the high direct medical cost.¹⁸

The major source of healthcare expenditure is out of pocket as cost-sharing of healthcare through insurance is developed recently in the past few years.¹⁹ In our context, the data reveals that the total population insured are only about 23%.²⁰ Prescription medications account for about half of the total medical costs for the treatment of hypertension causing economic burden to the country as they have to be taken for a long period of time.^{3,5} Therefore, it is essential to prescribe cost-effective medicine to benefit the patients financially. Hospitals can work in collaboration with the policy makers for incorporating the cost-effective medicine in their standard treatment protocol and also in hospital formulary.

There is a need to continuously perform cost-effective analysis of antihypertensive medicines in order to identify the most cost-effective therapy. As the protocols and the scenario can be different in different settings, there is a need to perform such analysis to be applicable in such settings.

CONCLUSIONS

As hypertensive patients need treatment for a long period, the appropriateness of cost incurred needs to be considered for appropriate decision making.

CONFLICTS OF INTEREST: None

SOURCE OF FUNDING: The study was funded by the University Grants Commission Nepal (SRDI-74/75-HS-16).

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