

Antihypertensive therapy and risk reduction: evidence-based recommendations for clinical practice.

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Introduction

Hypertension, or high blood pressure, is a common and serious condition that affects millions of people worldwide. It is a major risk factor for cardiovascular disease, stroke, and kidney disease, among other health problems. Antihypertensive therapy is a cornerstone of hypertension management, and it can significantly reduce the risk of associated health problems. In this article, we will explore evidence-based recommendations for antihypertensive therapy and risk reduction in clinical practice.

The goal of antihypertensive therapy is to reduce blood pressure to a level that reduces the risk of associated health problems. The American College of Cardiology/American Heart Association (ACC/AHA) hypertension guidelines recommend a blood pressure target of less than 130/80 mm Hg for most individuals with hypertension [1]. For individuals with diabetes, chronic kidney disease, or a history of cardiovascular disease, a blood pressure target of less than 130/80 mm Hg is also recommended. However, individualized targets may be appropriate for certain individuals based on their age, overall health status, and other factors.

Antihypertensive Medications

There are several classes of antihypertensive medications, each with their own mechanisms of action and side effect profiles. The ACC/AHA guidelines recommend starting with a thiazide diuretic, angiotensin-converting enzyme (ACE) inhibitor, angiotensin receptor blocker (ARB), or calcium channel blocker (CCB) as first-line therapy for most individuals with hypertension. Beta-blockers may also be used as first-line therapy in certain situations, such as for individuals with a history of heart attack or heart failure. Other medications, such as aldosterone antagonists, central alpha agonists, and direct renin inhibitors, may be used in certain situations or in combination with first-line therapies. For many individuals with hypertension, combination therapy with two or more medications may be necessary to achieve blood pressure control. The ACC/AHA guidelines recommend considering combination therapy as first-line therapy for individuals with stage 2 hypertension (blood pressure of 140/90 mm Hg or higher) or for those with a high cardiovascular disease risk. In addition, combination therapy may be considered for individuals with stage 1 hypertension (blood pressure of 130/80 mm Hg or higher) who have not achieved blood pressure control with a single medication [2].

Treatment Strategies

In addition to medication management, there are several treatment strategies that can help to reduce the risk of associated health problems in individuals with hypertension [3].

Lifestyle Modification

Lifestyle modifications, such as dietary changes, physical activity, weight loss, and stress management, can help to reduce blood pressure and improve overall health. The ACC/AHA guidelines recommend lifestyle modifications as first-line therapy for individuals with prehypertension (blood pressure of 120-139/80-89 mm Hg) and for those with stage 1 hypertension who have a low cardiovascular disease risk. Even for individuals who require medication management, lifestyle modifications can help to reduce the amount of medication needed and may help to reduce the risk of medication side effects.

Cardiovascular risk reduction strategies, such as smoking cessation and cholesterol management, can help to reduce the risk of associated health problems in individuals with hypertension. The ACC/AHA guidelines recommend smoking cessation for all individuals with hypertension and cholesterol management for those with a high cardiovascular disease risk or a history of cardiovascular disease.

Regular blood pressure monitoring is important for individuals with hypertension to ensure that blood pressure is being adequately controlled. The ACC/AHA guidelines recommend monitoring blood pressure at least once per year for individuals with a blood pressure of less than 130/80 mm Hg, and more frequently for those with higher blood pressure or other health problems. Individualize treatment based on patient characteristics: The choice of antihypertensive therapy should be tailored to the individual patient, taking into account their age, race, comorbidities, and other relevant factors. Use a team-based approach to hypertension management: Collaborative care involving a team of healthcare professionals, including physicians, nurses, pharmacists, and other specialists, can improve outcomes in patients with hypertension. Consider combination therapy for optimal blood pressure control: Combination therapy with two or more antihypertensive agents is often needed to achieve optimal blood pressure control in patients with hypertension [4,5].

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Monitor for adverse effects and adjust treatment accordingly: Regular monitoring of blood pressure, electrolytes, and renal function is important in patients receiving antihypertensive therapy. Adverse effects such as hypotension, electrolyte disturbances, and renal dysfunction should be promptly identified and managed.

Encourage lifestyle modifications: In addition to pharmacologic therapy, lifestyle modifications such as weight loss, increased physical activity, and dietary changes can help lower blood pressure and reduce cardiovascular risk. Use evidence-based treatment guidelines: Treatment decisions should be guided by evidence-based guidelines such as those published by the American College of Cardiology/American Heart Association, the European Society of Cardiology, or the National Institute for Health and Care Excellence. Consider the cost-effectiveness of treatment options: Antihypertensive therapy should be chosen based on its cost-effectiveness, taking into account the cost of the medication, the potential for adverse effects, and the potential for long-term benefits in reducing cardiovascular risk. Overall, antihypertensive therapy is a key component in the management of hypertension and reducing the risk of cardiovascular disease. Evidence-based recommendations and a tailored approach to treatment can help improve outcomes and reduce the burden of hypertension on patients and healthcare systems.

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