South African hypertension practice guideline 2014

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Abstract

Outcomes: Extensive data from many randomised, controlled trials have shown the benefit of treating hypertension (HTN). The target blood pressure (BP) for antihypertensive management is systolic < 140 mmHg and diastolic < 90 mmHg, with minimal or no drug side effects. Lower targets are no longer recommended. The reduction of BP in the elderly should be achieved gradually over one month. Co-existent cardiovascular (CV) risk factors should also be controlled. Benefits: Reduction in risk of stroke, cardiac failure, chronic kidney disease and coronary artery disease.

Recommendations: Correct BP measurement procedure is described. Evaluation of cardiovascular risk factors and recommendations for antihypertensive therapy are stipulated. Lifestyle modification and patient education are cornerstones of management. The major indications, precautions and contra-indications are listed for each antihypertensive drug recommended. Drug therapy for the patient with uncomplicated HTN is either mono- or combination therapy with a low-dose diuretic, calcium channel blocker (CCB) and an ACE inhibitor (ACEI) or angiotensin receptor blocker (ARB). Combination therapy should be considered ab initio if the BP is ≥ 160/100 mmHg. In black patients, either a diuretic and/or a CCB is recommended initially because the response rate is better compared to an ACEI. In resistant hypertension, add an alpha-blocker, spironolactone, vasodilator or β-blocker.

Validity: The guideline was developed by the Southern African Hypertension Society 2014.

Keywords: South Africa, hypertension, guideline

This is the sixth hypertension guideline published by the Southern African Hypertension Society (SAHS). Currently 30.4% of the adult population have hypertension (HTN), necessitating a simplified approach to assessment and treatment, which reflects realistic objectives that can be implemented by medical practitioners, nurse practitioners and pharmacists to diminish the impact of HTN and related cardiovascular disease (CVD) risk in this country. For full details on management not contained in this document please refer to the more detailed hypertension guideline 2011.

Objective

The objective of this guideline was to promote evidence-based, accessible and comprehensive management of HTN by healthcare professionals in the public and private sectors. Applicable HTN and CVD treatment and prevention guidelines were reviewed as well as HTN trials reporting clinical end-points, including those with important co-morbidities such as diabetes mellitus and chronic kidney disease.

Definition and grading of hypertension

HTN is defined as a persistent elevation of office blood pressure (BP) ≥ 140/90 mmHg (Table 1). The optimal BP is a value < 130/85 mmHg. High normal is BP levels from 130–139 mmHg systolic and 85–89 mmHg diastolic. This high-normal group of subjects is at higher CV risk and is also at risk of developing HTN, but does not require drug treatment. HTN is stratified into three grades depending on severity, which is useful in defining the approach to treatment.

Measurement of blood pressure

BP measurement is a vital clinical sign that is poorly performed by all healthcare professional categories. These recommendations apply to both clinic and self-measurement of BP. Failure to follow these

Table 1. Definitions and classification of office BP (mmHg). Adapted from ref 9

<table>
<thead>
<tr>
<th>Stage</th>
<th>Systolic BP (mmHg)</th>
<th>Diastolic BP (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt; 120</td>
<td>and</td>
</tr>
<tr>
<td>Optimal</td>
<td>120–129</td>
<td>and/or</td>
</tr>
<tr>
<td>High normal</td>
<td>130–139</td>
<td>and/or</td>
</tr>
<tr>
<td>Grade 1</td>
<td>140–159</td>
<td>and/or</td>
</tr>
<tr>
<td>Grade 2</td>
<td>160–179</td>
<td>and/or</td>
</tr>
<tr>
<td>Grade 3</td>
<td>≥ 180</td>
<td>and/or</td>
</tr>
<tr>
<td>Isolated systolic</td>
<td>≥ 140</td>
<td>and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 90</td>
</tr>
</tbody>
</table>

BP should be categorised into the highest level of BP whether systolic or diastolic.

Table 2. Recommendations for blood pressure measurement

Allow patient to sit for 3–5 minutes before commencing measurement.
The SBP should be first estimated by palpation to avoid missing the auscultatory gap.
Take two readings 1–2 minutes apart. If consecutive readings differ by > 5 mm, take additional readings.
At initial consultation measure BP in both arms, and if discrepant use the higher arm for future estimations.
The patient should be seated, back supported, arm bared and arm supported at heart level.
Patients should not have smoked, ingested caffeine-containing beverages or food in previous 30 min.
An appropriate size cuff should be used: a standard cuff (12 cm) for a normal arm and a larger cuff (15 cm) for an arm with a mid-upper circumference > 33 cm (the bladder within the cuff should encircle 80% of the arm).
Measure BP after 1 and 3 minutes of standing at first consultation in the elderly, diabetics and in patients where orthostatic hypotension is common.
When adapting the auscultatory measurement use Korotkoff 1 and V (disappearance) to identify SBP and DBP respectively.
Take repeated measurements in patients with atrial fibrillation and other arrhythmias to improve accuracy.

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