HYPERTENSION MANAGEMENT

COMPETING INDICATIONS AND CONTRAINDICATIONS

DIURETICS

DIURETICS (loop)

DIURETICS (thiazide; thiazide-like)

DIURETICS (other)

ACE-I

ARB

β-BLOCKER

Angiotensin pereceptor / aldosterone antagonist

Propanolol

Lifestyle changes

- Reduce alcohol consumption
- Increase fruit and vegetables
- Reduce physical activity
- Stop all tobacco products

Routine Tests and Measurements

<table>
<thead>
<tr>
<th>TEST</th>
<th>FREQUENCY</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>Every visit</td>
<td></td>
</tr>
<tr>
<td>BP</td>
<td>First visit</td>
<td></td>
</tr>
<tr>
<td>ER</td>
<td>Every visit</td>
<td></td>
</tr>
<tr>
<td>WC</td>
<td>Every visit</td>
<td></td>
</tr>
<tr>
<td>UREA</td>
<td>Every visit</td>
<td></td>
</tr>
<tr>
<td>ALBUMIN/CR</td>
<td>First visit then every 3 months</td>
<td>Procedure on diagnosis of diabetes mellitus type 2 or 5 years after the diagnosis type 1</td>
</tr>
<tr>
<td>BLOOD TESTS</td>
<td>Yearly</td>
<td>Procedure on diagnosis of diabetes mellitus type 2 or 5 years after the diagnosis type 1</td>
</tr>
<tr>
<td>HBA1C</td>
<td>Yearly</td>
<td>Diabetes only</td>
</tr>
<tr>
<td>ECG (RESTING)</td>
<td>Yearly</td>
<td>Refer to criteria for LVM, check for signs of ischaemia</td>
</tr>
</tbody>
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Step 1: Assess Major risk factors

- Levels of systolic and diastolic BP
- Smoking
- Obesity
- Dyslipidemia
- Diabetes mellitus
- Men > 45 years
- Family history of early onset of CVD

Step 2: Measure Blood Pressure according to SAHS guidelines

- Consider home or 24 hour BP monitoring in patients with stage 1 hypertension without TOD/complications/risk factors

Step 3: Lifestyle changes

- Reduce alcohol consumption
- Increase fruit and vegetables
- Reduce physical activity
- Stop all tobacco products

Step 4: BP Targets

- <140/90 mmHg
- <150/90 mmHg if > 80 years

Step 5: Target Organ Damage

- LVH based on ECG
- EKG
- Carotid ultrasound
- Ultrasound kidneys, CT scan/angiography

Complications

- Coronary heart disease
- Heart failure
- Chronic kidney disease: albuminuria > 30mg/mmol or eGFR < 60mL/min
- TIA = transient ischaemic attack
- ACE = angiotensin converting enzyme inhibitor
- ARB = angiotensin receptor blocker
- CCB = calcium channel blocker
- HF = heart failure
- ISH = isolated systolic hypertension

Routine Management

Step 1: Choose any of the following:

- Hydrochlorothiazide 12.5 - 25 mg daily or indapamide 1.25 - 2.5 mg daily
- ACE-I or ARB

Step 2: 1. Combine any 2 of the above

Step 3: • Spironolactone 25mg daily (monitor K+ and avoid if eGFR < 45 mL/min)
• β-blocker, e.g. atenolol, minoxidil, centrally acting drug, or hydralazine

Step 4: Consider furosemide 40mg in patients with stage 1 hypertension without TOD/complications/risk factors

Step 5: Consider home or 24 hour BP monitoring in patients with stage 1 hypertension without TOD/complications/risk factors

Step 6: Are there compelling indications/contraindications?

- TP
- Hyperkalaemia
- Labile hypertension

Step 7: Referral for specialist level

- Severe or resistant hypertension
- Labile hypertension
- Secondary causes suspected
- Progressive TOD, complications or multiple comorbidities
- Hypertensive urgency or emergency

Suggested referral to specialist level

- Vasodilators
- Diuretics
- β-blockers
- Angiotensin inhibitors

Abbreviations

- BP: blood pressure
- CCB: calcium channel blocker
- CVD: cardiovascular disease
- eGFR: estimated glomerular filtration rate
- HF: heart failure
- ISH: isolated systolic hypertension
- LVM: left ventricular mass
- eGFR: estimated glomerular filtration rate
- BP: blood pressure
- CCB: calcium channel blocker
- CVD: cardiovascular disease
- eGFR: estimated glomerular filtration rate
- HF: heart failure
- ISH: isolated systolic hypertension
- LVM: left ventricular mass