What is urgent about hypertensive urgency?

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Clinical question

What are the risks for asymptomatic patients who present with markedly elevated blood pressure (BP)?

Bottom line

Patients with markedly elevated BP have about a 40% risk of serious adverse events at 18 months if untreated. The risk for treated patients ranges from 14% at 1 month to 1.2% at 6 months. For most asymptomatic patients with BPs above 180/110 mm Hg, addition or initiation of oral agents at presentation with outpatient follow-up is reasonable.

Evidence

An RCT found the following:

- Hospitalized men (N = 143; mean BP 186/121 mm Hg) were randomized to hydrochlorothiazide, reserpine, and hydralazine versus placebo.[1]
  -At 18 months, the rate of retinal hemorrhage, stroke, dissecting aneurysm, myocardial infarction, or heart failure (HF) was 3% versus 39% for placebo (number needed to treat = 3).

Cohort studies of treated patients found the following:

- In 58 535 American outpatients (mean BP 185/96 mm Hg), 73% had known hypertension, about 60% were taking 2 or more BP drugs, and about 25% had known cardiovascular disease (CVD).[2]
  -At 6 months, the rate of myocardial infarction, stroke, or transient ischemic attack was 1.2%.
  -There was no difference between inpatient and outpatient management.
  -Inaccurate BPs are suspected, as 4.6% of about 2 million office visits had BPs above 180/110 mm Hg.
- Austrian patients (N = 384; BP > 220/120 mm Hg) received oral treatment and had numerous investigations and long-term follow-up.[3]
  -At 4 years, the rate of CVD, HF, or atrial fibrillation was 23%.
- In 164 Swiss primary care outpatients (mean BP 198/101 mm Hg),[4] 90% were asymptomatic or "urgent" (ie, had nonspecific symptoms: headache or dizziness).
  -At 1 year, the rate of CVD, HF, or peripheral vascular disease was 12.8%.
  -Limitations included the treating physician reporting outcomes.
- In 91 inner-city African and Hispanic patients (mean BP 209/128 mm Hg),[5] about 66% had nonspecific symptoms and 50% had known CVD. Most were treated with oral agents (clonidine) and had no follow-up.
  -At 1 month, the CVD, HF, or encephalopathy rate was 14%.

Context

- The definition of hypertensive urgency varies.
- Most hypertensive urgencies occur in those with known hypertension,[2,4,6] often owing to medication nonadherence.[2,5]
- Hypertension with acute symptoms associated with end organ damage, such as chest pain or confusion,[7] requires immediate intravenous treatment.[6]

Implementation

Before diagnosing hypertensive urgency, ensure correct BP measurement. Talking, improperly sized cuffs, and arms held below the heart can falsely elevate BP.[7] For most asymptomatic patients with BPs above 180/110 mm Hg, outpatient treatment[2] with conventional oral agents is appropriate. The optimal speed of BP lowering is unknown,[8] but rapid reduction is discouraged.[9] A reasonable approach is to target a BP of about 160/100 mm Hg, follow up promptly to ensure medication tolerability and compliance, and continue to lower BP gradually. These patients often need more than 1 antihypertensive drug.[10] Combination pills can improve adherence and lower costs.

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Competing interests
None declared

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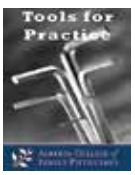

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