SEVERE HYPERTENSION

Draft NICE Guideline 2019 CKS 2018 American Guideline European Guideline 2018

Background

- Hypertension is largely a chronic condition diagnosed and managed in routine primary care settings however, episodes of new severe hypertension may present in acute care settings.
- There is almost no evidence base to guide management and the latest NICE draft guidance is formed of expert opinion.
- Nearly half of patients presenting with hypertensive crisis will have a secondary cause

Assessment:

- **Severe hypertension** is defined as clinic systolic blood pressure at least 180mmHg or clinic diastolic blood pressure at least 110mmHg. The number are less important than the associated symptoms and signs.
- **Look for end organ damage, causes of secondary hypertension and CV risk factors:**
  - End organ damage
    - Hypertensive retinopathy – grade 3 = retinal haemorrhage, grade 4 = papilloedema
    - ECG – to assess cardiac function and detect left ventricular hypertrophy/strain
    - Urine – dip for haematuria, and arrange measurement of urine albumin; creatinine ration
    - Bloods for electrolytes, creatinine, estimated glomerular filtration rate, total and DHL cholesterol, HbA1c

Management:

Refer patients for same day assessment if clinic BP>180/120mmHg and:

- Retinal haemorrhage or papilloedema OR
- Suspected phaeochromocytoma (labile or postural hypotension, headache, palpitation, pallor, abdo pain or diaphoresis) OR
- Life threatening symptoms such as new onset confusion, chest pain, signs of heart failure, or acute renal impairment.

For patients who do not need same day assessment but BP>180/110mmHg and:

- Target organ damage identified
  - Consider starting oral antihypertensive treatment immediately without waiting for results of ABPM or HBPM
- No target organ damage identified
  - Repeat clinic BP within 7 days.

Drug management:

- If initiating treatment in urgent care the aim is to reduce BP to 160/100 mmHg over 6-24hrs. More rapid reduction can cause ischemic organ damage
- The draft NICE guideline makes no specific treatment recommendation for severe hypertension but the step 1 treatment regime remains unchanged:
  - ACEi or ARB if T2DM or under 55yrs.
  - CCB if over 55 years or of African or Caribbean family origin.
The recent American and European Hypertension guidelines both made strong recommendations that any patient with stage 2 hypertension (average home BP reading > 150/90) should be considered for initial combination drug treatment which would encompass patients presenting with severe hypertension.

Rationale: the majority of patients with BP>20/10mmHg over the target will require 2 or more agents to achieve blood pressure control. They recommend;
- ACEI or ARB + CCB or
- ACEI or ARB + Diuretic (If CCB unsuitable)

Practical Points:
- Initiating an ACEI/ARB in an urgent care setting without knowledge of a patient’s eGFR is into without risk and this may indicate which strategy is followed and which agent is prescribed. Nifedipine MR or amlodipine are possible agents
- Avoid using a short-acting agents- severe rebound hypertension/ organ damage can occur
- Make sure the patient has an appropriate follow up with their own GP to monitor BP and review investigations

Secondary Care approach:

Given the lack of evidence base, it should come as no surprise that our secondary care colleagues have classified severe hypertension differently.

Severe hypertension = BP > 180/120mm/Hg but typically BP>220/120-130mmHg

Hypertensive Emergency = Severe hypertension + ACUTE end organ damage, which includes:
- Cerebral infraction or haemorrhage
- Acute pulmonary oedema
- Hypertensive encephalopathy
- Acute aortic dissection
- Acute coronary syndrome
- Eclampsia (can occur at lower pressure)
- Acute renal failure
- Phaeochromocytoma

Hypertensive emergencies are life-threatening and should be treated with emergency response and blue light transfer. Patients are cared for in coronary or intensive care

Hypertensive Urgency = severe hypertension + progressive (non-acute) end organ damage

If we apply the draft NICE guidance here:
- Retinal haemorrhage or papilledema
  - Same day referral- often treated in secondary care with oral agents and closely monitored
- Other progressive target end organ damage e.g. LVH, abnormal urine dipstick
  - Consider starting oral antihypertensive treatment immediately in primary care without waiting for results pf ABPM or HBPM
- Those with severe hypertension but without evidence of end organ damage do not meet the classification of hypertensive urgency and clinic BP can be repeated within 7 days in primary care.