NHS
Mersey and West Lancashire Teaching Hospitals NHS Trust

ED Hypertension Guidance

Name
DoB
Hospital no

For *non-pregnant* patients presenting with *sole* complaint of high BP.

Triage BP | | |

If 1st BP>140/90 repeat and use LOWEST MEASUREMENT

BP < 140/90 → Discharge from triage if no other concern.
Advise BP monitoring in community and GP follow up.

BP 140/90 – 179/119 → Essential investigation: ECG (for LVH)
Clinician review for symptom screening (see **A**)

BP > 180/120 → Essential investigations: ECG
U&E, FBC
Urine dip
Fundoscopy
Clinician review for symptom screening (see **A**)

If patient is pregnant refer to obstetrics on bleep 7260

A. Clinician Review

The aim is to identify end organ damage (EOD) associated with hypertension (see table below for guidance).
If the patient has any of the listed symptoms, trigger the appropriate investigation.

If there is no evidence of EOD and there are no other concerns, diagnose with **hypertension** and discharge (see **B**).

If there are any positive findings or symptoms that strongly suggest EOD in a patient with BP > 180/120, diagnose as **hypertensive emergency** and treat (see **D**).

Symptoms		Possible end organ damage	Investigation
Chest pain	Y/N	Left ventricular strain/hypertrophy	ECG
Shortness of breath, fatigue	Y/N	Cardiac ischaemia	Troponin
		Heart failure	Chest X-Ray
		Aortic dissection	+/- appropriate further investigations
Haematuria	Y/N	Renal impairment	Urine dip
Oliguria	Y/N		U&E
Nocturia	Y/N		
Headache	Y/N	Cerebral haemorrhage	Fundoscopy
Visual disturbance	Y/N	Cerebral encephalopathy	CT head
Vomiting	Y/N		(note that CT may be normal)
New focal neurology	Y/N		
New confusion	Y/N		
Seizure	Y/N		

B. Hypertension with no evidence of EOD and no other concerns

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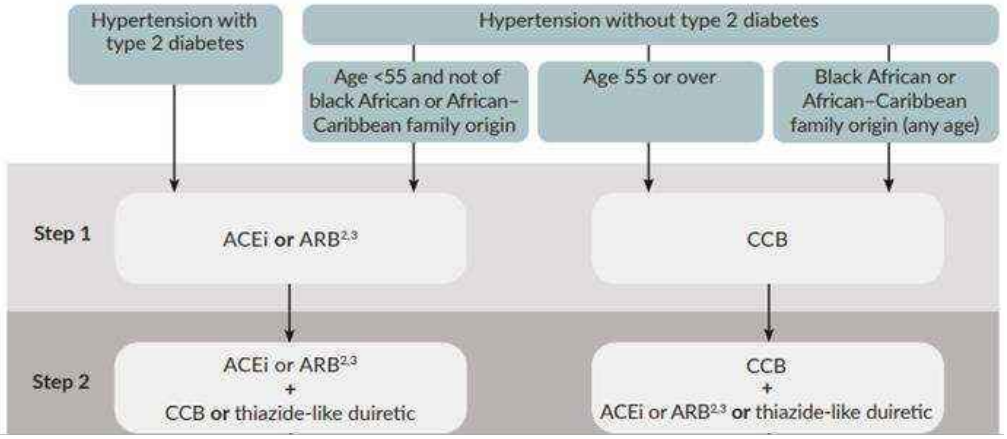
Discharge patient with:

- New or increased antihypertensive **if BP>180/120** (see **C**).
  - TTO to cover till GP review.
  - Do NOT need to normalise BP before discharge.
- Verbal advice and Patient Information Leaflet (*link here*).
- GP in 1-2 week for
  - ongoing BP monitoring
  - review response to medication
  - repeat U&E if started on ACE-inhibitor

If patient is **under 40y** refer to AMU clinic to consider secondary causes.

C. Antihypertensive guidance from NICE (NG136, 2022)



ACE inhibitor: Ramipril 2.5 mg- 5mg OD **CCB:** Amlodipine 5 mg OD (2.5 mg if elderly or frail)
Pregnant patients: Labetalol 100mg BD. Avoid ACE-inhibitors and ARBs (risk of congenital abnormalities).

D. Hypertensive Emergency = BP>180/120 with End Organ Damage

Control BP with the following recommended antihypertensive treatments, on a monitor, and discuss with a senior.
Refer promptly to appropriate specialties. These patients will not go home from ED.
Avoid beta-blockers in patients who have taken cocaine, amphetamines or other sympathomimetic drugs.
Aim to lower MAP by 25% over 1 hour, not faster. MAP = BP_{syst} + (BP_{syst} - BP_{diast})/3

Cardiac ischaemia: GTN IV infusion 600mcg/h then titrate. Or atenolol IV 5mg/5min, repeat once at 15min.
Pulmonary oedema: Usual GTN and furosemide may decrease HTN. If not, start nitroprusside IVI 0.5mcg/kg/min, increase by 0.5mcg/kg/min every 5min as needed.
Eclampsia (=pre-eclampsia + seizure): $MgSO_4$ IV 4g/10min then IVI 1g/h for 24h. Crash bleep Obstetric Emergency.
HELLP/pre-eclampsia: Labetalol 200mg PO if delay to IVA. Labetalol IV: load 50mg/5min, repeat at 10min if needed. Then infusion rate 50mg/h, increase by 50mg/h every 30min to max 150mg/h.
Hypertensive encephalopathy or Phaeochromocytoma: Labetalol IV 50mg/2min, then 50mg every 5min to max total 200mg.
Cerebral haemorrhage: Labetalol IV 10mg/2min, repeat every 2min to max total 200mg.
Dissecting aneurysm: Labetalol 50mg IV bolus, can repeat to max total 200mg. Then IVI 2mg/min.
Stroke: Urgent Stroke team input, depends on thrombolysis decision.
Renal impairment: Urgent Renal team advice.