

Kaikov T
Bates S
Keegan DA

Hypertension Assessment

Manual BP

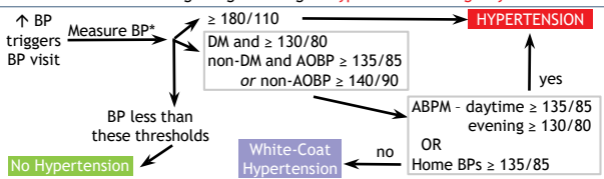
PATIENT: Back, arm supported, empty bladder, seated comfortably with legs uncrossed X 5 min, no talking prior/during measurement.

CUFF: Over bare arm, 3 cm above elbow crease, at level of right atrium, width & length of cuff bladder should be 40% & 80-100% of arm circ.

MEASUREMENT: Inflate 30 mmHg above radial pulse obliteration, deflate by 2 mmHg per sec; do 3 times, at least 60 sec apart; discard 1st, take avg. of 2nd + 3rd.

Diagnosis

BP \geq 180/120 + acute target organ damage = **hypertensive emergency** \rightarrow EMS/ED



* Measurements ideally taken by automated BP machines (AOBP)

Routine laboratory assessment (if dx): Na, K, Cr (or eGFR), FBG, fasting lipid panel, urinalysis (for blood & prot), ECG (for LVH), consider Alb:Creat. ratio.

History and Physical: Red Flags

Secondary Hypertension	GENERAL SIGNS: abrupt or severe onset, or ages <25 or >55. *Tests to consider
	CONTRIBUTING FACTORS: \uparrow salt intake, sedentary, stress.
	HYPERTHYROIDISM: palpitations, sweating, tremor, anxiety, freq. bowel movements, weight loss, vision changes, goiter. <i>TSH</i>
	AORTIC COARCTATION: interscapular murmur, delayed femoral pulses, asymmetric BP across both arms or leg. <i>CXR, CT-Angio</i>
	CUSHINGS: easy bruising, truncal obesity, hyperglycemia, hirsutism, prox. muscle weakness, thin skin, ecchymosis, facial plethora, round face, buffalo hump, striae, depression, anxiety, psychosis. <i>24-hr urine cortisol excretion</i>
	PRIMARY HYPERALDOSTERONISM: resistant HTN, signs of \downarrow K ⁺ : arrhythmias, muscle weakness, fatigue, \downarrow DTR & bowel sounds. <i>Ald:renin ratio</i>
	OSA: snoring, witnessed apneas, daytime drowsiness, AM headache, impaired concentration. <i>Sleep study with O2 saturation monitoring.</i>
End Organ Damage	RENAL PARENCHYMAL DISEASE: Hx of UTIs/obstructions, hematuria, NSAID abuse, FamHx of polycystic kidney disease, abdominal mass. <i>Renal US</i>
	MEDS/HERBS: NSAIDs, OCP, steroids, pseudoephedrine, cocaine.
	PHEOCHROMOCYTOMA: episodes of headaches, sweating & \uparrow HR. <i>Plasma Fractionated Metanephrines, 24hr urine for metanephrines</i>
	PERIPHERAL ARTERY DISEASE: claudication, asym or delayed femoral pulses, cold extremities and weak/absent pedal pulses; carotid, abdominal, femoral bruits. <i>ABI, US Doppler</i>
	HEART FAILURE: exertional SOB, fatigue, PND, orthopnea, S3, murmurs, \uparrow JVP, displaced apical impulse, basilar crackles, peripheral edema.
CAD: angina ARRHYTHMIA: Palpitations, SOB, presyncope, syncope.	
LVH: S4, sustained apical impulse. <i>ECG, ECHO, Holter Monitor</i>	
STROKE/TIA: on PMHx, abnormal strength, gait, speech, cognition. <i>MRI, CT</i>	
HYPERTENSIVE RETINOPATHY: advanced findings include hemorrhages, exudates, papilledema on fundoscopy. <i>Ophthalmology referral</i>	