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1-Minute Pearls/Pitfalls for the Clinician

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QUESTION 1: SHOULD I TREAT MY ASYMPTOMATIC PATIENT WITH HIGH BLOOD PRESSURE IN THE HOSPITAL?

A 76-year-old man with essential hypertension and obesity was admitted to the hospital two days ago for lower extremity cellulitis. His blood pressure (BP) has been elevated during hospitalization, ranging from 142/76 to 190/114. Heart rate is between 78-90 beats per minute. He denies having any chest pain, shortness of breath, headache, or vision changes in the hospital. He regularly checks his blood pressure at home and states that the "top number" is usually around 120 or 130. Outpatient medications are lisinopril (40 mg) and hydrochlorothiazide (25 mg), which have been continued in the hospital. He was also given a one-time dose of oral clonidine (0.1mg) after a cross-cover clinician was paged twice about a systolic BP greater than 180 mm Hg. Physical exam is remarkable for left leg has erythema and tenderness to palpation, which are all improved. Serum creatinine is 0.8 mg/dL and potassium 3.8 mEq/L. Should you treat the high blood pressure readings in the hospital? Should you add another antihypertensive agent for better blood pressure control on discharge?

A: Essential Hypertension is a common diagnosis amongst hospitalized patients, and elevated blood pressure is a ubiquitous finding amongst inpatients. *Severe hypertension* is defined as SBP>180mmHg or DBP>120mmHg. It may or may not be associated with acute, life-threatening complications of end-organ damage such as hypertensive encephalopathy, retinal hemorrhages, papilledema, acute or subacute kidney injury, and pulmonary edema. Much more common, however, is the relatively asymptomatic or completely asymptomatic patient with blood pressure in the "severe" range (i.e., ≥180/≥120 mmHg), with no signs/symptoms of acute end-organ damage. A typical clinician's reaction is either to treat with a short-acting oral or intravenous antihypertensive agent or to intensify patients' chronic antihypertensive regimen at discharge. It has been shown that for patients admitted for noncardiac conditions, 14% of the patients were discharged with intensified antihypertensive treatment, while >50% of these patients had well-controlled blood pressure prior to hospitalization.[1] This practice is associated with higher rates of subsequent acute kidney injury and myocardial injury, and there was no BP level at which treatment was associated with improved clinical outcomes.[2] It is associated with an increased risk of readmissions and serious adverse events within 30 days, such as ED visits or hospitalization, falls with injury, syncope, hypotension, electrolyte abnormalities, and acute kidney injury. In the long term, this practice is noted to have no improvement in BP control and is associated with an increased risk of cardiovascular events at one year (for those with well-controlled baseline BP). It also offers no significant impact on mortality at 30 days or one year. In summary, there is no indication to treat the intermittent high blood pressure readings in the absence of any end-organ injury in the inpatient setting. There is also no need to add another antihypertensive medication at discharge, especially in patients with adequate blood pressure control in the outpatient setting.

QUESTION 2: SHOULD I BE WORRIED ABOUT MY PATIENT WITH RELATIVE BRADYCARDIA?

45-year man who is fully vaccinated against COVID-19 is admitted with a 3-day history of fevers, myalgias, non-bloody diarrhea and a non-productive cough. He returned from trip to Southeast Asia about a week ago. He denies overt contacts with patients with COVID-19. He has a relatively benign past medical history and is not on any routine medications. He is febrile with a temp of 39.8C, Heart rate of 52/min, Blood pressure 121/64mmHg. Should you be concerned about the bradycardia?

A: This patient has relative bradycardia: Originally described by Jean Charles Faget, a Physician who was based in Louisiana. This association of this condition extend s beyond cases of yellow fever and intracellular obligate bacterial pathogens. One will be tempted in this case to limit his work up to Typhoid fever, Malaria, Legionella Pneumonia, Mycoplasma, and other infections. More recently COVID-19 especially the Omicron variant has been associated with Faget's sign.[3] There are however non-infectious causes of relative bradycardia, such as Lymphoma, CNS lesions and drug fever. Infectious causes include Babesiosis, Leptospirosis, Viral Hemorrhagic fevers, Psittacosis, Q fever, Typhus, Colorado tick fever, Rocky Mountain Spotted fever, Typhus.

QUESTION 3: WHAT SHOULD YOU DO WITH ADRENAL INCIDENTALOMAS?

A 52-year-old man with history of diverticulosis presents with hematochezia. CT angiogram (CTA) of abdomen and pelvis reveals no evidence of ongoing blood loss. He is managed conservatively, has no recurrence of blood loss, and is scheduled for an outpatient colonoscopy. His CTA however showed an incidental right adrenal mass – radiology report stated it is 3.5cm in size, lipid rich with Hounsfield units of 8, and recommends a repeat imaging study 12 months. What should you do about the adrenal masses?

A: All Incidental adrenal masses (Incidentalomas) have to be assessed clinically and radiologically. Masses should be assessed for evidence of hormonal activity, and for concern for malignancy. All adrenal masses should be assessed for evidence of hypercortisolism even in the absence of overt clinical features. Testing to exclude pheochromocytoma and hyperaldosteronism should be done in those who are hypertensive. In the absence of hypertension, pheochromocytoma should be excluded in those with Hounsfield units >10 units. Masses greater then 4cm should raise concerns about malignancy.[4] In addition to repeat imaging to be done in 1 month, this patient will need evaluation for evidence of cortisol excess before his discharge or by his PCP.

Conflicts of Interest

The authors declare they have no conflicts of interest.

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