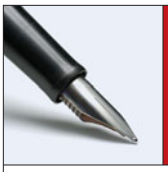

LETTER FROM THE EDITOR-IN-CHIEF

Urgent Care Is the Best Place for Patients with 'Hypertensive Urgencies': Why We Should Stop Sending Patients with Asymptomatically High Blood Pressure to the ED

Most public health campaigns, with a few notable exceptions, have been abject failures. One undeniably successful example, however, has been awareness of the dangers of high blood pressure.

As recently as the early 1970s, when the Framingham Study was published, there was still considerable disagreement in the medical community about the risks of untreated hypertension. But in the face of mounting evidence, it soon became clear that persistently elevated blood pressure was dangerous to a number of organ systems. Additionally, it was also around this time when the terms "hypertensive emergency" and "hypertensive urgency," defined respectively as severely elevated BP *with or without* evidence of acute organ injury/dysfunction, entered our clinical lexicon.

And so began an ongoing era of much semantic confusion.

Soon after this, in a fantastically enduring marketing move, the American Heart Association (AHA) labeled hypertension "the silent killer," conjuring images of a masked assassin climbing through unsuspecting citizens' windows at night as they slept. As public acknowledgment of the dangers of untreated hypertension grew over the ensuing decades, electronic blood pressure cuffs began appearing in grocery stores and pharmacies. Technology continued to improve and automatic cuffs got smaller and more affordable. Ultimately, we arrived where we are today—a situation where it is commonplace for many patients to check their blood pressures at home, often multiple times per day.

And while there are undeniable and catastrophic consequences to inadequately treated hypertension, this campaign combined with the increasing ubiquity of BP monitoring devices created an era of mutual neuroticism on the part of patients and clinicians alike.

We've all seen such patients. They're the unfortunate souls already prone to hypochondriasis. For them, blood pressure serves as an easily quantifiable and apparently global metric of health. And, as we've all witnessed, they tend to monitor it with painstaking rituality. They then agonize over these values which they've dutifully recorded in large binders like a high school student taking the SATs.

We as healthcare practitioners have certainly played our role in this *folie a deux*. Partially out of concern for the wellbeing of our patients, but undoubtedly out of some concern for malpractice liability as well, medical providers (but more often, I believe, allied health practitioners such as dentists, chiropractors, pharmacists) will instill a fear of imminent death in otherwise stable patients because of a single BP reading of 190/110.

These patients, who often have an acutely painful condition such as a broken tooth, may simply be experiencing an expected physiological response to the pain. Rather than receiving the care they sought for the broken tooth or strained neck, what commonly happens instead is that the patient is told by a member of the office staff that they need *immediate medical attention*. I've even seen ambulances called on occasion for asymptomatic patients who happen to check their blood pressure and get a high reading while leisurely shopping at the pharmacy.

Before the rise of urgent care as a prevalent setting for acute care needs, these patients were uniformly sent to the ED. Unfortunately, this still occurs with surprising frequency today. In the ED, these patients with severe asymptomatic hypertension, more commonly referred to in the past as "hypertensive urgency," tend to receive highly variable care. Some patients get an EKG, others renal function testing. Some get troponins drawn and heads

CT'ed. Some get all of the above. Rarely in the ED, however, do patients get nothing done to them at all.

One reason so much testing is done in the ED when patients present with asymptomatic hypertension is that the testing can be accomplished easily—commanded instantly with just one click in the EMR. Moreover, the ED is an environment with a bend towards action, and patients generally expect things to be done to them when they go there (whether indicated or not).

The problem is that patients with severe asymptomatic hypertension generally don't need anything done acutely. The American College of Emergency Physicians' (ACEP) most recent practice guidelines actually state that "routine screening for target organ injury and routine ED medical intervention (ie: treating high blood pressure immediately) is not required."[1] This is because the rates of acute hypertension related complications (eg, ACS, hemorrhagic stroke) over the subsequent 30 days in such patients is quite low (<1% of patients).[2]

Additionally in cases of asymptomatic hypertension/hypertensive urgency, patients sent to the ED have been found unsurprisingly to be hospitalized more often and to undergo more testing than patients treated in an outpatient setting. But no associated improvements in clinical outcomes were found (ie, no fewer strokes or heart attacks) when these patients were sent to an ED for hypertensive urgency.[3]

Most importantly perhaps, though, is that sending people to the ED for asymptomatically elevated blood pressure sends the wrong message. It continues to propagate the notion that high blood pressure is an emergency, which it almost never is (with one notable exception being possible pre-eclampsia in the latter half of pregnancy). Patients understandably internalize this notion that high blood pressure is an imminent and immediate threat. It causes them much stress and anxiety. They perseverate over the exact numbers and recheck their blood pressure compulsively. And this ultimately leads to frantic phone calls and worried visits because "my BP keeps going up."

We need to liberate our patients from this mental blood pressure prison and give them permission to relax.

The weight of evidence from numerous studies on the subject suggests that hypertension is undoubtedly dangerous, but over the course of years, or even decades (*not* hours or days). In fact, lowering severely elevated blood pressure immediately and dramatically carries significant risk of precipitating cerebral ischemia (especially in the elderly). In other words, more often than not, we put patients at risk when we treat severe hypertension as an emergency.

Certainly, obtaining a serum creatinine to evaluate a patient's renal function and getting a baseline EKG is reasonable. But a creatinine of 1.7 and ST changes consistent with left ventricular hypertrophy don't mean that the patient is having a hypertensive emergency (eg, acute renal failure or heart failure/ACS), but rather these are expected findings of chronically, poorly controlled BP. Again, sending these patients to the ED will simply add financial burden and stress to the patient—not exactly therapeutic when you're concerned about high blood pressure!

It is actually, therefore, quite apt that severe asymptomatic hypertension (specifically defined as >180/120) is still, at times, referred to as a "hypertensive *urgency*" because urgent care is the ideal setting for this to be addressed. In UC, patients can be assessed quickly for clinical signs/symptoms suggestive of hypertensive emergency/*acute* end organ damage. In the absence of concerning symptoms or physical exam findings of acute organ dysfunction (eg, severe chest pain, rales, neurologic deficits), current recommendations do not equivocate that gradually lowering blood pressure over the next few days, regardless of the degree to which the blood pressure is elevated, is reasonable and appropriate.[4] This may mean starting a first-line antihypertensive agent from UC or simply referring the patient back to their primary care provider for a visit the next day if feasible. What it does not mean, however, is sending an asymptomatic patient to the ED where they will wait for hours to be seen and receive a large bill with no appreciable benefit.

So, yes, we can agree that untreated hypertension is a "silent killer." But it doesn't kill swiftly, at least not without considerable noise (ie, dramatic symptoms). In the absence of such a ruckus, patients need education, reassurance, and gradual correction of their elevated BP much more than they need the stress and expense of emergency department care. And after you reassure them of this, try checking their blood pressure again. Most often, once patients hear that they are not, in fact, about to drop dead, their BP tends to come down quite nicely on its own. ■

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