Precipitous Painless Paraplegia: an Atypical Vascular Etiology for a Stroke Code

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INTRODUCTION:

In Emergency Medicine we are becoming increasingly aware of the cognitive pitfalls that plague our specialty as a result of our duty to make critical decisions with limited information.¹ While pre-hospital triage systems and expedited protocols for time sensitive diseases such as stroke, STEMI, and trauma have been instrumental in helping patients receive the urgent care they need, they can also lead to diagnostic error because of cognitive biases such as triage cueing or anchoring.² As we will see in this case, careful consideration of other differentials and use of point of care ultrasound can help emergency providers correctly diagnose illness when time is essential.

CASE DESCRIPTION:

A 65 year old male with a history of hypertension called 911 for acute onset of weakness in both of his legs. He was seated at work when he suddenly fell onto the ground and began telling coworkers that his legs felt “sour.” Patient denied any back, chest, or abdominal pain. He had true lower extremity weakness so was activated as a stroke alert by paramedics. He was met in the ambulance bay for evaluation where exam was notable for complete paraplegia with sensory deficit below the waistline and absent rectal tone.

Bedside ultrasound was performed by the emergency team and images are shown below.

Cardiothoracic and vascular surgery were immediately consulted and a CT scan was performed that confirmed dissection of the ascending aorta extending into bilateral iliac arteries. Patient was emergently taken to the OR for successful repair of Stanford Type A aortic dissection and was transferred to the CVICU post operatively. On hospital day 2 he became increasingly hypotensive and aortic dissection and was transferred to the CVICU post operatively.

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Aortic dissection is a rare diagnosis with incidence estimated at 5-30 cases per million people per year.³ Of those cases, painless aortic dissection is only a small fraction occurring in an estimated 5% of all aortic dissections. Painless aortic dissection has been associated with increased mortality generally due to delayed diagnosis.⁴⁵ While a neurologic complaint occurs in up to nearly 30% of acute aortic dissections, paraplegia as the primary neurologic complaint is estimated at only 3% of that subgroup, making the combination of painless paraplegia as initial presenting symptom exceedingly rare.⁶⁷ The ability to quickly and accurately diagnose an acute dissection is critically important as mortality increases every hour that treatment is delayed.⁸

CONCLUSION:

Realizing the atypical presentation and using our skills as bedside sonographers helped us to immediately diagnose the patient when the wheels of our healthcare system would have expedited him away to neuro-imaging and the true etiology would have only been discovered on autopsy.⁹ There are many diseases just as life threatening as aortic dissection that can present in atypical and exceedingly rare ways, and it is crucial that as emergency providers we train ourselves to recognize when we need to take a step back from the system and evaluate patients in a different way.

REFERENCES: