Received: 10 September 2020 | Revised: 7 October 2020 | Accepted: 9 October 2020

DOI: 10.1002/emp2.12300

JACEP OPEN
JOURNAL OF THE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS OPEN
A GLOBAL JOURNAL OF EMERGENCY MEDICINE
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IMAGES IN EMERGENCY MEDICINE

Neurology

Man with nausea, vomiting, and left-sided weakness

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1 | CASE

A 65-year-old man presented to the emergency department with nausea, vomiting, and left-sided weakness that started the morning prior to arrival. He denied any chest pain. Physical examination revealed paralysis in his left arm and leg, but no other deficits were appreciated. A stroke workup was initiated, and CT of the brain without contrast was obtained as seen in Figure 1, and CT angiogram of the head and neck obtained happened to include part of the patient's ascending aorta.

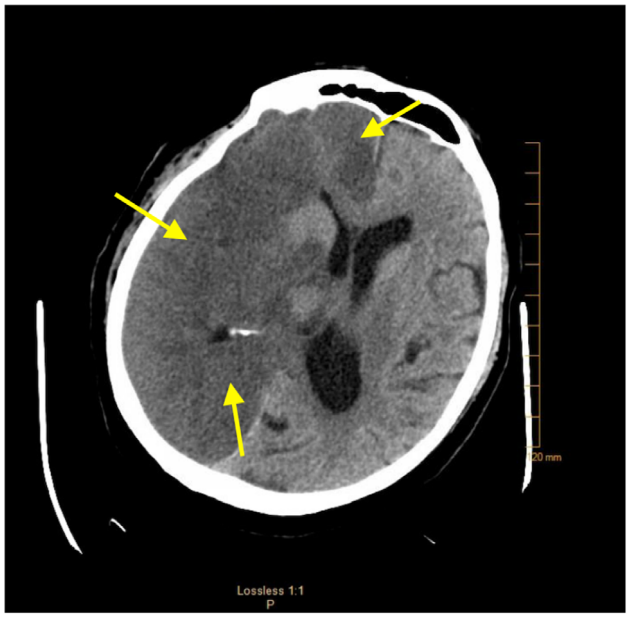

FIGURE 1 Head CT reveals right hemispheric infarction

2 | DIAGNOSIS

Stanford type A complex aortic dissection (AD) with the dissection flap causing occlusion of the right common carotid artery.

3 | DISCUSSION

Although aortic dissections classically present with sudden, tearing chest pain, clinical presentations are diverse and ≈ 10% of patients present with no pain at all.[1] Presentations of AD often mimic other diseases that subsequently leads to delays in diagnosis. Neurological symptoms have been reported in 30% of patients with AD, and atypical symptoms in conjunction with neurological deficits should raise suspicion for this rare diagnosis.[2,3]

Treating what is presumed to be an ischemic stroke with fibrinolytic therapy can have lethal complications in those with aortic pathology. It is essential to consider aortic injury for any fibrinolytic candidate prior to administration of the therapy.[4] Chest X-ray has been used for decades as an acute imaging modality to evaluate the thorax prior to fibrinolysis. Emergency bedside ultrasound is non-invasive and has been shown to be a useful adjunct in the rapid diagnosis of acute aortic dissections. A recent prospective study demonstrated that emergency physicians using bedside ultrasound were 88% sensitive in detecting Type A Stanford acute aortic dissections, and it has the advantage of being rapidly available.[5] There are limitations, however, as results are largely operator and patient dependent. However, other imaging studies including CTA of the chest continues to be the gold standard for diagnosing acute dissections.[6–8]

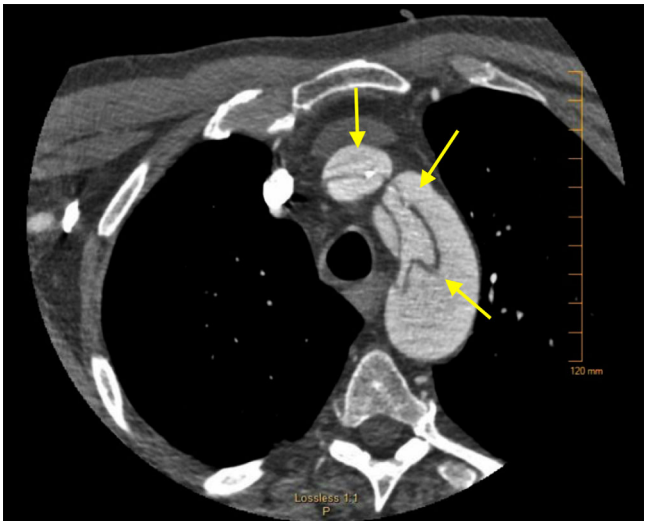

FIGURE 2 Arrows identify intimal flap of Stanford Type A Aortic Dissection

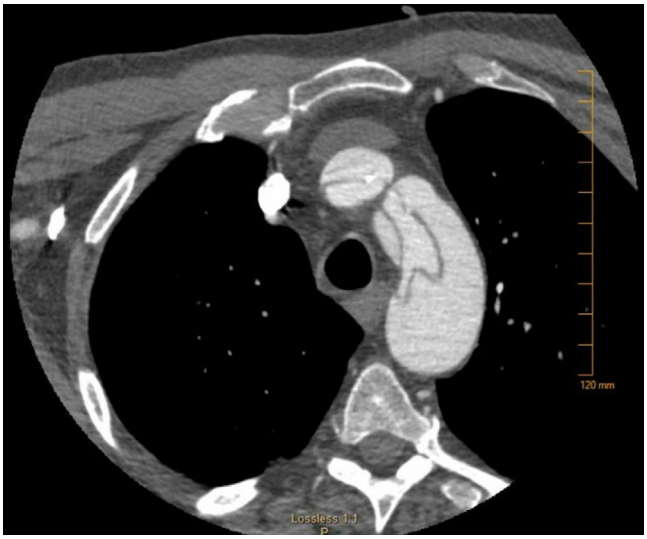

FIGURE 3 Aortic dissection image without arrows

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How to cite this article: White JJ, Cambron JD. Man with nausea, vomiting, and left-sided weakness. *JACEP Open*. 2020;1:1763–1764. https://doi.org/10.1002/emp2.12300