



Clinical Communications: Adult

A CASE OF BURNING THROAT PAIN

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Abstract—Background: Throat pain is a common complaint in the emergency department. The related diagnoses are varied, from simple gastroesophageal reflux disease to catastrophic aortic dissection. This case highlights the importance of pertinent patient history and frequent reassessments in order to recognize the latter. **Case Report:** A 58-year-old woman was found to have a type A aortic dissection after initially presenting to the emergency department with a chief complaint of “burning” throat pain. Throughout the patient’s evaluation in the emergency department, her symptoms evolved from the complaint of mild throat pain and water brash to development of chest pain and sudden right lower extremity cramping. Her history of hypertension, smoking, and a previous cerebral aneurysm prompted further intervention, including aggressive blood pressure control and emergent imaging. A computed tomography scan with angiography revealed the diagnosis of a type A aortic dissection. **Why Should an Emergency Physician be Aware of This?:** We highlight the importance of recognizing that patient presentation may change throughout the course of the emergency department stay, and that our case represents an atypical presentation of serious disease. © 2019 Published by Elsevier Inc.

Keywords—emergency medicine; hypertension; uncommon presentations; vascular surgery

INTRODUCTION

Throat pain is a common emergency department (ED) complaint, and the differential can range from simple gastroesophageal reflux disease (GERD) to a catastrophic aortic dissection. Taking a pertinent history and reassessment on changes in patient condition are necessary in order to identify the latter, as outlined in this case report on a patient with a thoracic aortic dissection who initially reported burning throat pain.

CASE REPORT

A 58-year-old woman presented to the ED reporting burning throat pain after eating a spicy dinner approximately 1 h before arrival. She expressed concern for a possible allergic reaction to seafood. Her complaint was isolated initially, and she was triaged with the chief complaint of “throat pain.” As she had associated water brash, she was given aluminum hydroxide but did not experience any relief. Over the course of her ED visit, she began to describe intermittent midchest pain radiating to the left jaw and epigastrium. She denied dyspnea or other systemic complaints. Her medical history included hypertension, cerebral aneurysm rupture status post-intravascular coiling, which the patient stated presented as jaw pain and feels similar. She reported occasional ethanol use and regular tobacco use but no illicit drug use.

Her vital signs revealed blood pressure of 192/100 mm Hg, a heart rate of 82 beats/min, a respiratory rate of 20

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breaths/min, an oral temperature of 37.1°C, and an oxygen saturation of 100% on room air. She appeared significantly uncomfortable and was grasping at her neck, describing a continuous burning sensation. The physical examination revealed no significant head, eyes, ears, nose, or throat, cardiac, respiratory, or neurologic findings.

The differential diagnosis at this time included more benign pathologies, such as GERD or gastritis, as well as more sinister pathologies, including esophageal injury, carotid artery dissection or aneurysm, cerebral aneurysm, acute coronary syndrome, and hypertensive emergency. To further evaluate for the complaint of jaw pain and the fact that these symptoms were similar to previous vascular catastrophe, computed tomography angiography (CTA) of the head and neck was ordered.

Laboratory studies, including a complete blood cell count, metabolic panel, and troponin were unremarkable. An electrocardiogram revealed nonspecific T-wave inversions in V4/V5. A chest radiograph demonstrated a mildly uncoiled, slightly prominent aorta with an anterior mediastinal mass (Figure 1). Approximately 2 h into her ED visit, while awaiting CTA of the head and neck to evaluate for carotid dissection, the patient's course acutely changed and she developed right lower extremity cramping pain and feelings of paralysis and paresthesia. She remained hypertensive despite labetalol and had persistent chest discomfort despite aluminum hydroxide, morphine, and an anxiolytic. Peripheral pulses and motor and sensation of her right lower extremity became diminished. An emergent CTA scan of the chest, abdomen, and pelvis demonstrated a type A aortic dissection with renal



Figure 1. Chest radiograph of a normal-sized heart, with a mildly uncoiled and slightly prominent aorta. Note the mass in the anterior mediastinum or suprahilar region.



Figure 2. Type A thoracic aortic dissection with extension into the coronary artery.

and iliac involvement (Figures 2 and 3). Immediate consultation to cardiothoracic surgery and vascular surgery was obtained.

Labetalol and nitroprusside infusions were emergently initiated; however, the patient's mental status progressively deteriorated. She underwent emergent operative repair with aortic graft and a coronary artery bypass grafting, as well as exploration of bilateral femoral arteries, which led to bilateral lower extremity fasciotomies caused by severe ischemia. Despite these interventions, withdrawal of care occurred after approximately 1 week because of persistent multiorgan failure. This case depicts the unpredictable presentation and rapidly evolving nature that can occur with an aortic dissection.

DISCUSSION

Aortic dissection is a rare and challenging emergency with a high rate of mortality. The diagnosis is unsuspected by physicians in >50% of the clinical presentations and occurs without classic chest pain in ≤20% of cases (1). Factors such as hypertension, smoking, drug abuse, dyslipidemia, diabetes, connective tissue disorders, and

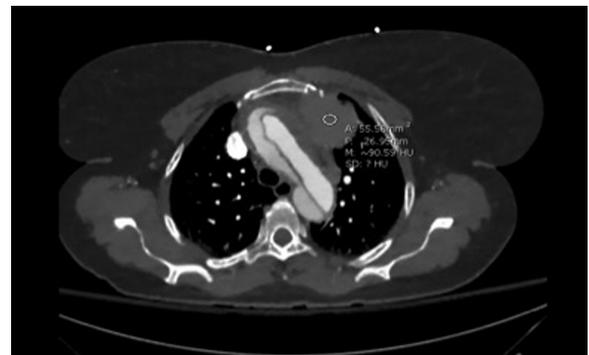


Figure 3. Type A thoracic aortic dissection with an incidental anterior mediastinal mass.

previous cerebral aneurysm, as was the case in this patient, increase the risk of aortic dissection (2,3).

Patients presenting to EDs with a chief complaint of throat pain is common, although typically carries a wide differential diagnosis. The patient's chief complaint of burning throat pain was thought to be related to GERD, especially after a spicy meal of jambalaya. An allergic reaction was ruled out without any other organ system involvement, though the patient reported possible exposure to shrimp, a previously known allergen. The constellation of symptoms appeared to be more related to GERD, but the presentation changed throughout her visit, including persistent severe hypertension and the onset of neurologic symptoms in her extremities. This prompted us to hasten the CTA study, thus concluding a final diagnosis of type A aortic dissection.

A previous case report from China Medical University Hospital described a 53-year-old man presenting with throat pain after chewing a betel nut; he ultimately suffered from an aortic dissection (4). In this case the patient was initially discharged home because there were no abnormal findings but promptly returned after experiencing worsening sore throat, chest pain, diaphoresis, and syncope. The presentation evolved, and appropriate studies were ordered leading to the unfortunately fatal diagnosis.

A review of cases outlined in *Mayo Clinic Proceedings* highlights the clinical features of aortic dissection (5). Acute severe chest pain was by far the most common initial complaint, but approximately 15% of patients had no complaints of pain (5). The article notes that less common presentations included congestive heart failure, syn-

cope, neurologic symptoms including hemiparesis and paraplegia, and lower extremity ischemia (6). To our knowledge, this is the first case of an aortic dissection presenting initially as a burning throat pain before the onset of chest, back, or extremity complaints.

WHY SHOULD AN EMERGENCY PHYSICIAN BE AWARE OF THIS?

In the case above, the patient initially presented with the focus of her complaint on throat pain. This highlights the importance for providers in the ED to consider the atypical presentation of an acute aortic dissection masquerading in patients presenting with throat pain and associated risk factors or significant symptoms.

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