

**Title:** Isolated Leg Pain and Paralysis: Following the Course of Aortic Dissection

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**Introduction**

This case describes a patient who presented to the ED as a stroke alert due to right lower extremity paralysis described as painful. She was found to have an extensive aortic dissection from the aortic valve to the right common iliac artery. What is remarkable about her presentation is that she did not report any "classic" symptoms or have classic signs of aortic dissection, reminding that this illness can present without typical signs.

**Case Description**

71 year old African American female presented to the ED via EMS as haste call of stroke alert. For 30 minutes PTA, she had numbness in her right leg from the knee down that was painful, as well an inability to move her right leg at the knee, ankle or toes. She also had a mild right sided facial droop and left tongue deviation. Distal pulses were intact and equal bilaterally. Blood pressure, checked in both arms, showed no variance. CT Brain and CXR showed no acute pathology. The pain accompanying the patient's persistent numbness and loss of motor function were not typical of stroke and raised suspicion for a non-cerebral vascular lesion. CTA studies revealed a Type A aortic dissection originating at the level of the aortic valve. It involved the right carotid, bilateral subclavian, celiac, superior mesenteric and right renal arteries. It extended down to the right common iliac artery, causing of the patient's symptoms. Due to the aortic valve involvement, the patient was transferred to a facility capable of open heart surgery. She had a modest return of RLE motor and sensory at time of transfer. The patient's BP and HR remained stable during her ED course until the time of transfer when a nitroprusside drip was started by the transfer team. The accepting hospital was contacted a few days later for follow up who relayed that the patient had expired.

**Discussion:**

Aortic dissection is a process of serious consequence that emergency physicians must always remember to consider. It is a relatively uncommon illness, with an incidence estimated from 2.6 to 3.5 per 100,000 person-years. Classically, patients describe severe, "tearing" chest pain with radiation to the back, abdomen or other locations depending on site of dissection. This patient was a noteworthy case as she lacked any of the typical features of aortic dissection. She did not have sudden onset of severe, tearing chest pain. Her mediastinum was not widened on chest X-ray. There was no variance in pulses or blood pressure.

Upon literature review, this presentation is indeed a known phenomenon, but rather extraordinary, only occurring in 4% of aortic dissections. Elderly patients are more likely to have such atypical presentation. One research study has attempted to assist recall and improve identification of this anomalous presentation with the acronym: ILEAD (Ischemia of the Lower Extremities due to Aortic Dissection). The crucial point from this case is to never forget that initial presentation can be misleading and if not recognized, can lead to catastrophic consequences.

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