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

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### Introduction

This case describes an elderly patient who presented as a stroke alert for right lower extremity paralysis. The patient was found to have an extensive aortic dissection extending from the aortic valve to the right common iliac artery. This case is a notable reminder than an aortic dissection can present without classic signs or symptoms.

### Presentation and History

**Chief Complaint:** Right lower extremity paralysis

**History of Present Illness:** 71 year old African American female presented to ED as a haste call of stroke alert. Patient reported right lower extremity paralysis and numbness from the knee down that started 30 minutes prior to arrival that was described as painful. EMS also reported a right sided facial droop. She denied any chest pain, shortness of breath, nausea, vomiting, fever, chills, abdominal pain, headache, dizziness or trauma. PMH: Hypertension, Hypolipidemia; TIA x 2; Hypothyroidism, Laryngeal cancer, Atrial fibrillation, GI bleed (while on warfarin)

**PSH:** Partial laryngectomy, tracheostomy

**Social:** Former tobacco smoker

**Medications:** aspirin, “blood pressure med”, levethoxynine, “stain”

**Allergies:** No known allergies

**Vital signs:** 124/70 (LUE) 134/74 (RUE) HR 69 RR 18 Temp 97.6°F 96% RA BG 89

### Physical exam:

**General:** AAO x 3; apparent discomfort due to pain in RLE

**HEENT:** pupils 2mm equally reactive bilaterally

**Cardio:** +S1, S2. RRR. no murmurs

**Resp:** CTA bilaterally

**Abdomen:** ABD: 39 L/R. no masses. RLE: +, no distention

**Neuro:** Mild right sided facial droop; left tongue deviation

**Extremity:** RLE decreased sensation circumferentially from the knee distally including toes; unable to actively move at right knee, ankle or toes

**Skin:** Left lower extremity motor and sensory intact

**Normal mental status. No difficulty forming thoughts or with word finding.**

**NIH Stroke Scale:** 9

**Extremity:** posterior tibial and pedal pulses 2+ bilaterally

### Differential Diagnosis

**Neuro:**

- TIA/CVA
- Intracranial Hemorrhage
- Mononeuropathy: Entrapment/Compression

**Cardiac:**

- Acute Coronary Syndrome
- Scleral Cord Compression
- Guillain-Barre Syndrome
- Transverse Myelitis

**Metabolic:**

- B12/Folate Deficiency
- Hypokalemia

**Endocrine:**

- Severe Hypothyroidism

### Laboratory data

<table>
<thead>
<tr>
<th>Vitals</th>
<th>Values</th>
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<tbody>
<tr>
<td>HR</td>
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The pain accompanying the patient’s numbness and loss of motor function were not typical of a stroke and raised suspicion for a non-cerebral vascular lesion. CTA Chest/Abdomen/Pelvis revealed an extensive Type A aortic dissection, as high as the right carotid artery, with involvement of the right common iliac artery, causing the patient’s symptoms.

Due to the aortic valve involvement, the patient was transferred to a facility capable of open heart surgery. The patient had a modest return of RLE motor and sensory at the time of transfer. Her BP and HR remained stable during her ED stay until the time of transfer, when a nitroglycerin drip was started by the transfer team. The accepting hospital contacted a few days later for follow up and relayed that the patient had expired.

### ED Course and Investigations

Stroke Alert was called after patient arrival. Teleneurology evaluated the patient as per hospital protocol. CT Brain and CXR were unremarkable for acute pathology.

ERG did not demonstrate any acute changes.

### Discussion

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 pulse 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 of this anomalous presentation with the acronym: ILEAD (Ischemia of the Lower Extremities due to Aortic Dissection). The crucial point for this diagnosis is to never forget that initial presentation can be misleading and if not recognized, can lead to catastrophic consequences.

### References