Abstract

Objectives: Transient cauda equine syndrome is believed to occur secondary to temporary cuada equina compression. This syndrome has not been reported to occur secondary to malperfusion from complicated Type B TAD. We present diagnosis and endovascular treatment strategies for managing transient ischemic cauda equine syndrome.

Methods: From 2015 - 2017, 92 patients with Type B thoracic aortic dissections (TAD) were evaluated that underwent a variety of endovascular thoracic and abdominal aortic interventions. Of these 4 patients presented with transient reproducible symptoms that only occurred with ambulation and included saddle region paresthesias, lower extremity weakness & paresthesias, and urinary incontinence; suggestive of cauda equine syndrome. All patients had spine MRI, which was negative for spinal stenosis, compression, or infarction.

Results: Detailed CTA evaluations indicated that in all patients the abdominal aortic true lumen...
had significant narrowing (mean diameter 4.8 mm), and the dissections extended into both common iliac arteries compromising flow to bilateral internal iliac arteries. All 4 patients underwent endovascular interventions including aortoiliac septotomy and bare metal or stentgraft placement in the aorta and iliac arteries. All patients experienced complete resolution of their transient cauda equine symptoms and have resumed normal activities.

**Conclusions:** This is a first report of transient ischemic cauda equine syndrome resulting from Type B TAD where the aortic true lumen and pelvic flow is significantly compromised. Endovascular interventions including septotomy and intraluminal stent/stentgraft placements can improve aortic and pelvic flow and resolve these symptoms in select patients.

1. This research focuses on better understanding complications of TAD that have in the past not been recognized
2. Our improved understanding of these complications enables us to better design procedures for patient treatment and management

**Author Disclosure Block:**

- **M. Mehta:** Consulting Fee; W.L. Gore, Boston Scientific, Silkroad Medical. Consulting Fee; My Role; speaker. Other financial benefit; Medtronic, NIH, Bolton Medical. Other financial benefit; My Role; Principal Investigator. **P. Paty:** None. **Z. Kostun:** None. **D. Hoosier-Paty:** None. **C. Frazier:** None. **A. Suchdeve:** None.