

Physician - Aortic (Thoracic) Pathologies and Surgery/Endovascular Interventions

[MEP-30]

A Case Report of Newly Developed Paraplegia After Acute Type A Aortic Dissection Repair

Hamdi Mehmet Özbek¹, Emre Demir Benli², Elif Coşkun Sungur², Ahmet Sarıtaş²

¹Department of Cardiovascular Surgery, Sincan Training and Research Hospital, Ankara, Türkiye

²Department of Cardiovascular Surgery, Ankara City Hospital, Ankara, Türkiye

Cardiovascular Surgery and Interventions 2024;11(Suppl 1):MEP-30

Doi: 10.5606/e-cvsi.2024.mep-30

E-mail: hmozbek@yahoo.com

Received: September 13, 2024 - Accepted: September 29, 2024

A Stanford type A aortic dissection is associated with elevated preoperative mortality and morbidity rates, as well as an increased likelihood of postoperative complications. Among these complications, paraplegia represents a serious but rare occurrence that can lead to significant morbidity in affected individuals. A 55-year-old male patient experienced acute paraplegia in the postoperative period after Stanford type A aortic dissection. Upon detection of paraplegia, medical therapy was promptly initiated. Despite maintenance of hemodynamic stability following surgery, the patient's neurological deficit persisted at 24 h postoperatively. In response, cerebrospinal fluid (CSF) drainage was performed. Notably, a full clinical recovery in neurological function was observed within 5 h of initiating CSF drainage. The pathophysiology underlying postoperative paraplegia in the context of aortic dissection remains unclear. However, with the maintenance of hemodynamic stability, appropriate medical management, and the persistence of neurological symptoms, the implementation of CSF drainage may be considered to facilitate resolution of symptoms. Emergent aortic surgeries can lead to devastating neurological complications. Among these complications, paraplegia can be managed successfully and considered a potentially reversible condition with these interventions.

Keywords: Aortic dissection, paraplegia.

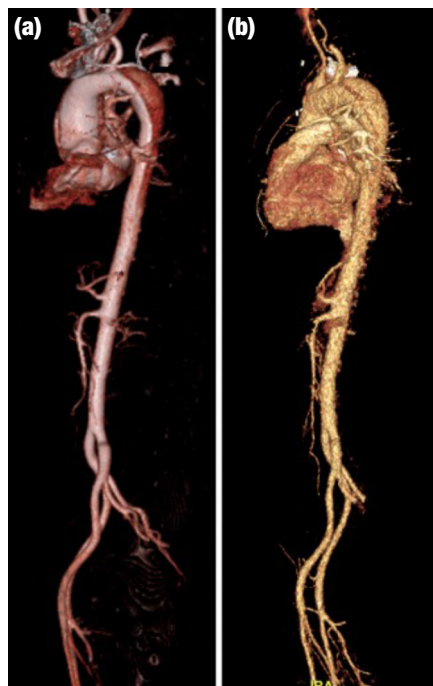


Figure 1. Comparison of the dissection flap by using three-dimensional computed tomography. (a) Preoperative, (b) Postoperative.

References

1. Coselli JS, LeMaire SA, de Figueiredo LP, Kirby RP. Paraplegia after thoracoabdominal aortic aneurysm repair: Is dissection a risk factor? *Ann Thorac Surg* 1997;63:28-35. doi: 10.1016/s0003-4975(96)01029-6.
2. Kawanishi Y, Okada K, Nakagiri K, Kitagawa A, Tanaka H, Matsumori M, et al. Three cases of newly developed paraplegia after repairing type A acute aortic dissection. *Ann Thorac Surg* 2007;84:1738-40. doi: 10.1016/j.athoracsur.2007.05.076.
3. Medalion B, Bder O, Cohen AJ, Hauptman E, Schachner A. Delayed postoperative paraplegia complicating repair of type A dissection. *Ann Thorac Surg* 2001;72:1389-91. doi: 10.1016/s0003-4975(00)02590-x.
4. Carroll AM, King RW, Ghincea CV, Aftab M, Reece TB. Spinal cord protection for thoracoabdominal aortic aneurysm repair: From bench to bedside. *Ann Cardiothorac Surg* 2023;12:438-49. doi: 10.21037/acs-2023-scp-08.
5. Safi HJ, Hess KR, Randel M, Iliopoulos DC, Baldwin JC, Mootha RK, et al. Cerebrospinal fluid drainage and distal aortic perfusion: Reducing neurologic complications in repair of thoracoabdominal aortic aneurysm types I and II. *J Vasc Surg* 1996;23:223-8. doi: 10.1016/s0741-5214(96)70266-5.
6. Scali ST, Kim M, Kubilis P, Feezor RJ, Giles KA, Miller B, et al. Implementation of a bundled protocol significantly reduces risk of spinal cord ischemia after branched or fenestrated endovascular aortic repair. *J Vasc Surg* 2018;67:409-23.e4. doi: 10.1016/j.jvs.2017.05.136.