## C52

# Spinal cord infarction after surgery of aortic dissection: Case Report

Sung Hyun Kim[1*], Jong Yun Yoo MD[1†]

Asan Medical Center, Department of Rehabilitation Medicine[1]

**Introduction**

Both surgical and endovascular repair of an aortic aneurysm or dissection can lead to spinal cord infarction (SCI) because the vascular supply of the spinal cord largely originates directly from the aorta. SCI in patients undergoing aortic repair is related to the ischemia or occlusion of the anterior spinal artery. The rate of SCI in patients undergoing aortic repair seems to vary depending on the presence and location of dissection, aneurysm rupture, and type of repair.

**Case presentation**

A 44-year-old man was treated ascending aorta replacement due to aortic dissection type B in 2006. During the follow up without any symptoms, the thoracoabdominal aorta was increased to 64mm in 2016. He underwent replacement of thoracoabdominal aorta from just distal aortic arch to iliac bifucation in November 2016. Circulatory arrest was used for distal aortic arch replacement. Distal aortic arch was anastomosed with reverse elephant trunk graft. Arch 4 branch graft was used to bypass intercostal in descending thoracic aorta and inferior mesenteric artery. Coselli graft was bypassed with bilateral renal arteries, superior mesenteric artery, celiac arteries. The operation took almost 11 hours. On examination both the upper limbs had normal tone and power. Biceps brachii, triceps brachii reflexes were normoactive. Both the lower limbs had reduced tone and the power was of Medical Research Council (MRC) grade 0/5. Both knee and ankle jerks were decreased with equivocal plantar response. There was no sensation including pain, light touch and temperature from T5 level. He conducted clean intermittent catheterization due to urinary retention. Anal tone was decreased and there was no anal sense. Magnetic Resonant Imaging (MRI) was taken 3 months later after paraplegia. Myelomalacia with mild atrophy below T5 level was observed. Diffuse heterogenous T2 signal intensity was revealed along the spinal cord below T5 level. It is considered to be a sequel of ischemic injury of spinal cord.

**Conclusion**

Surgical repair of an aortic aneurysm or dissection could cause in reduction of spinal arteries, resulting in spinal cord infarction. In addition, these surgeries could cause hypoperfusion of spinal artery because of long operation time.

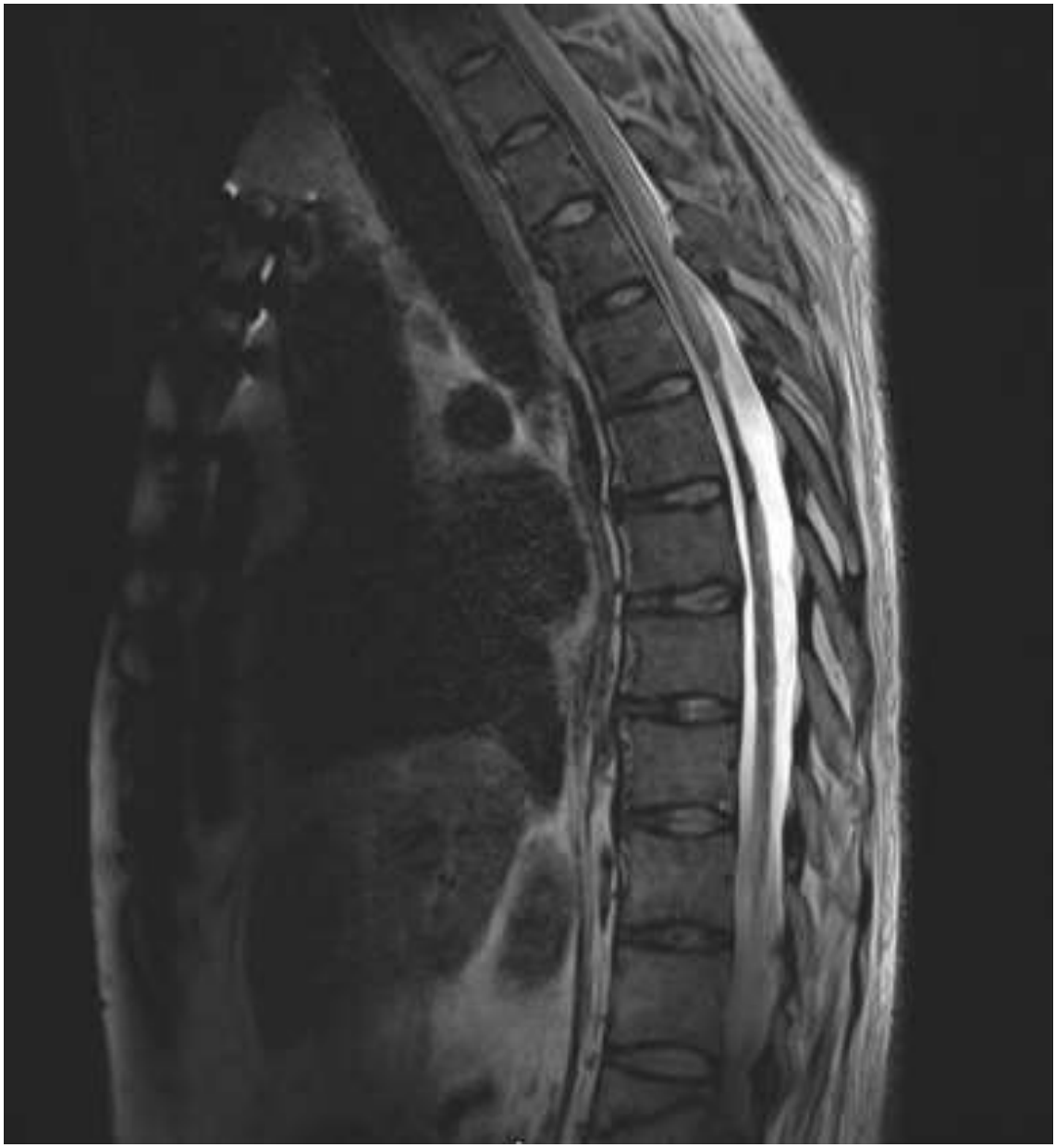

Fig 1. MRI (sagittal T2-weighted image) of the thoracic spine showing myelomalacia at T6 level with mild atrophy at below T6 level