척수재활

게시일시 및 장소 : 10 월 19 일(토) 08:30-12:30 Room G(3F)

질의응답 일시 및 장소 : 10 월 19 일(토) 11:00-11:30 Room G(3F)

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A Case of Spinal Cord Infarction Following Nontraumatic Vertebral Artery Dissection

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Case Report

A 47-years-old man noticed progressive weakness of the neck and right upper extremity in the morning and referred to a clinic. MRI of the brain and cervical spine showed cervical myelopathy along C2 to C3 and herniated nucleus pulposus at C5-C6. He received conservative treatment including rehabilitation, but the symptoms did not improve at all. After 2 weeks, weakness of the right extremities suddenly progressed. On physical examination, the Medical Research Council (MRC) scores of the right elbow flexor and knee extensor showed 3. Hypoesthesia on both the upper and lower extremities was also noted. The neurologic level of injury was C3 AIS C. The lesion of the Spinal cord extended to C2-C6 level in the follow-up cervical spine MRI. CT with angiography was performed and the right vertebral artery dissection (VAD) at V2 to V4 level was found. Despite treatment including steroid pulse and dual antiplatelet therapy, the disease gradually worsened over time. The muscle strength of the right elbow flexor and the right knee extensor decreased to 1 and 0. After 6 weeks of rehabilitation, the right elbow flexor recovered to 2, but the right knee extensor was not recovered at all. There was no apparent neurogenic lower urinary tract dysfunction.

Conclusion

The spinal cord is mainly supplied by a single anterior spinal artery that supplies the anterior two-thirds of the spinal cord and paired posterior spinal arteries. The entire blood supply to the spinal cord is also reinforced by numerous radicular arteries. Injury to these vessels can cause a spinal cord infarction. The vertebral artery branch out various branches, radicular arteries, and anterior spinal arteries. For this reason, damage to the unilateral vertebral artery may show the clinical manifestation of dominant ipsilateral motor weakness which is mixed Brown-Séquard and anterior cord syndrome. In this case, the patient received intensive rehabilitation treatment after a period of immobilization due to neurological deterioration. Thus, neck rotational motion during rehabilitation intervention should be strictly limited in the early stage of spinal cord infarction.

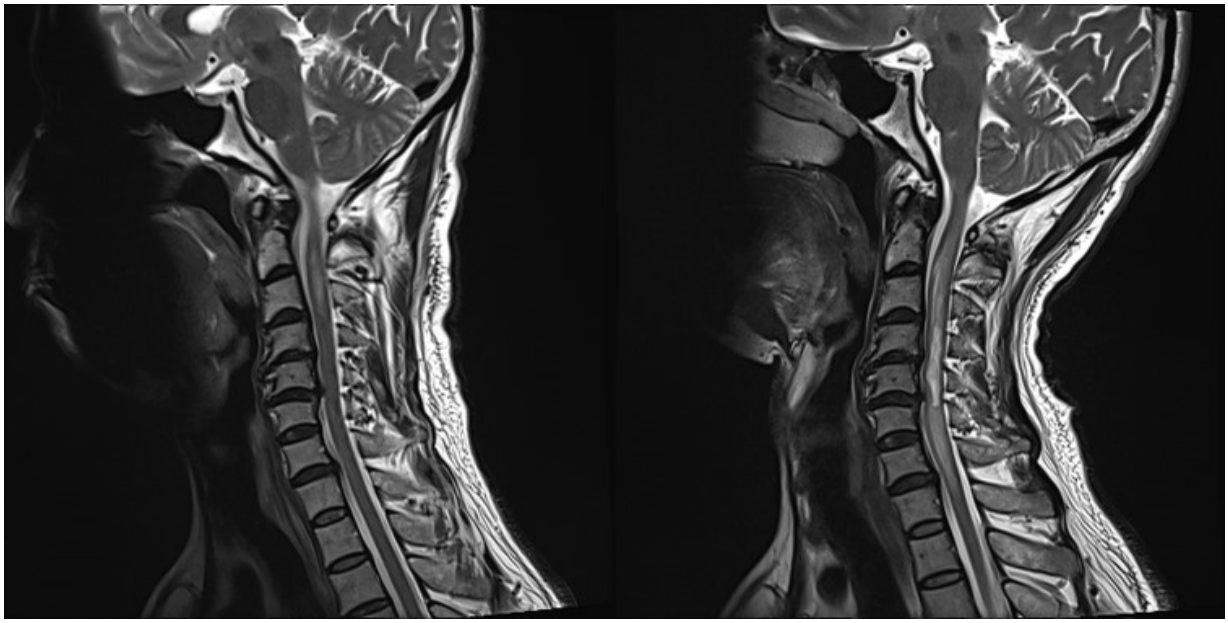

Figure 1 Initial and follow up cervical spine magnetic resonance imaging (MRI) in sagittal plane

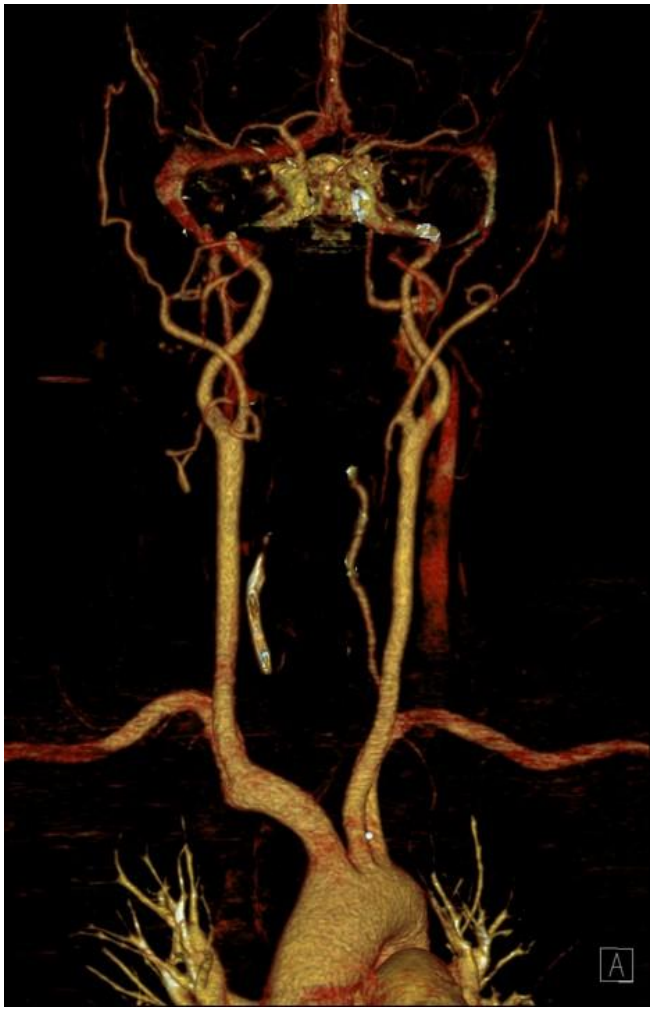

Figure 2 Computed tomography (CT) angiography 3D vertebral artery