C49

Surfer's myelopathy : case report

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Introduction

Surfer's myelopathy is rare type of non-traumatic spinal cord caused by hyperextension of the back in inexperienced surfers. The etiology of surfer's myelopathy is unknown, but spinal cord ischemia is presumed to be a main etiology. The aim of this study is to report the two case of diagnosed with surfer's myelopathy and illustrates management and outcomes.

Case I

A 30 years old previously healthy man took a first surfing and lying on surfboard with repetitive hyperextended of back for about 90 minutes. He developed a back pain, followed by gradual lower extremities weakness, tingling sensation and gait disturbance. Symptoms were gradually progression, he presented with a zero grade lower extremity weakness, loss of sensory up to the level T10, and loss of bladder and bowel function. Magnetic resonance imaging (MRI) demonstrated increased signal on T2 weighted images in T8-T12 level of spinal cord and mild swelling (figure 1. 1-a,b). Diffusion tensor images exhibited heterogeneous mildly increased signal on diffusion weighted images (DWI) with decreased apparent diffusion coefficient (ADC) in T9-T12 level, especially T10 level of spinal cord. He was prescribed high dose steroid and was transferred to a rehabilitation medicine. Two months later, he could perform 60 meter therapeutic ambulation with high walker after wearing both knee brace. And his hip abductor muscle strength is improvement to poor grade and anal tone get better. But fifteen months later, his weakness and sensory loss was continued and he need clean intermittent catheterization.

Case II

A 22 years old previously healthy man took a surfing lesson in Hawaii. About 30 minutes later, without a traumatic event, he developed acute, severe pain in his back. Within a few minutes, he developed weakness, paresthesia of lower extremity. He was taken to the emergency room and diagnosed with surfer's myelopathy. Physical examination revealed zero grade lower extremity weakness, loss of sensory up to the level T12, hypoactive of deep tendon reflexes in both legs. MRI demonstrated increased signal on T2 weighted images in T8-conus medullaris level of spinal cord (figure 1. 2-a,b). Diffusion tensor images exhibited increased signal on diffusion weighted images (DWI) with decreased apparent diffusion coefficient (ADC) in T11-12 level. He was prescribed high dose steroid and was transferred to a rehabilitation medicine. One months later, no change of neurologic deficit except voiding difficulty. Twenty five months later, he used wheelchair in similar condition without neurological improvement.

Conclusion

Although surfer's myelopathy is rare disease, the chance of experiencing is expected to increase in Korea because surfing population is increasing. Several cases have been reported fully or near-fully recovered though two cases of this study was poor prognosis. Awareness of this devastated condition will help early detection and active rehabilitation.

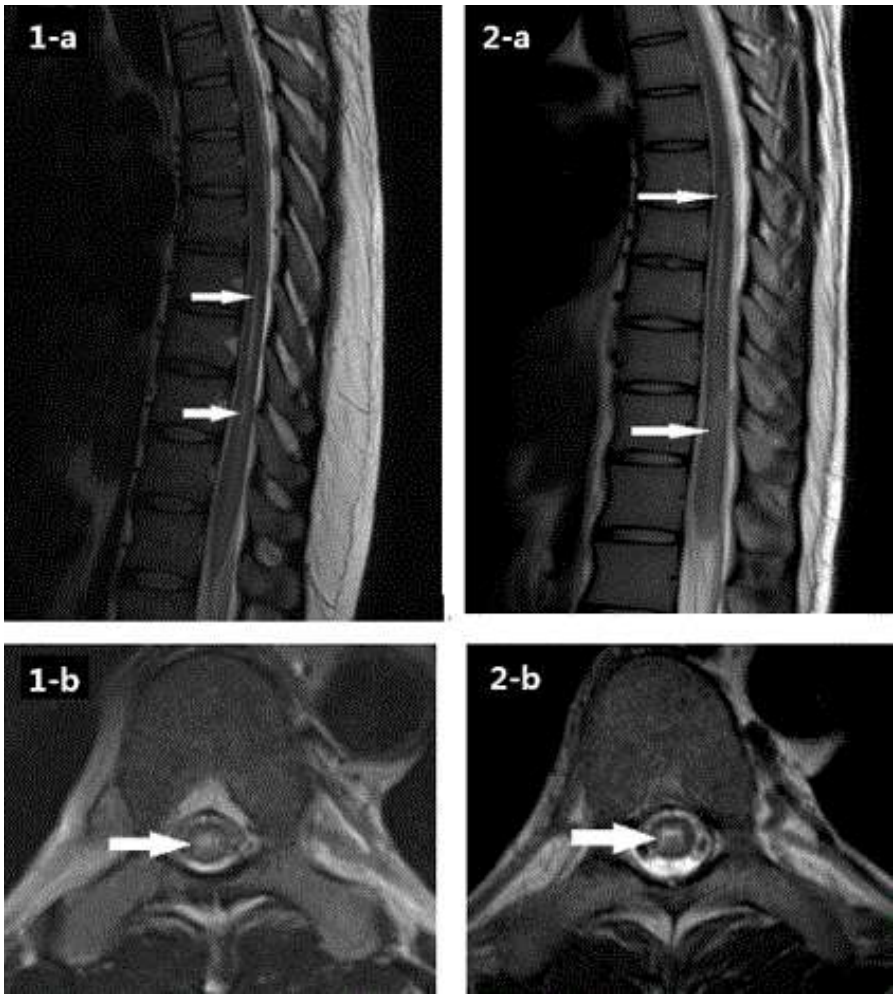

Fig 1. Case I (1-a,b), Case II (2-a,b). Sagittal and axial T2-weighted MR images demonstrate hyperintensity of the spinal cord (arrows).