

The Effect of Rehabilitation on Spontaneous Hematomyelia Patient without Surgery : A Case report

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Objective

Spontaneous intramedullary spinal cord hemorrhage (hematomyelia) is a rare disease. A small number of cases reported the post-operative effect on spontaneous hematomyelia, but few cases reported the effectiveness of rehabilitation. We report on efficacy of rehabilitation on spontaneous hematomyelia patient without surgical resection.

Materials and Methods

A 79-year old female visited our emergency department complaining of sudden-onset back pain on thoracic level, weakness and sensory disturbance in both lower legs, voiding difficulty, which had started 2 weeks ago prior to her visit. At initial neurological examination, her Berg Balance Scale(BBS) score was 13 and Korean version of Modified Barthel Index(K-MBI) score was 60. Her Manual Muscle Test(MMT) marked fair plus for right leg and poor plus for left leg, and she was unable to walk independently. Sensation was decreased below the T4 dermatome. Her anal tone was decreased, and voiding was not possible. She had no history of trauma and had been taking an antihypertensive medication from the past. Laboratory test were within normal limits. Whole spine magnetic resonance imaging(MRI) revealed an hematomyelia at the C7-T3 level, which showed as a high signal in a T1 weighted image and a low signal in a T2 weighted image. However, showing variable intensities in the T1 weighted, T2 weighted image is associated with acute and subacute phase hemorrhage, and preoperative diagnosis was hemorrhagic spinal cavernous malformation. Many neurosurgeon advocated that surgical treatment is the most effective and most cases reported on effects after a surgical resection. However, in this case, the patient was considered to have a low benefit of surgical resection due to the facts that she was an old age and weakness of lower extremities no longer progresses. So, she just started rehabilitation.

Results

Two weeks after visiting the emergency department, she was transferred from the neurosurgery department to the rehabilitation department and started physical therapy twice a day. Urodynamic study was performed for voiding dysfunction. The Result was obstructive pattern and residual urine was checked with 300cc and foley catheter was reinserted. After that, the patient underwent bladder training along with medication. After 3 months of physical therapy, Numeric pain rating scale(NRS) of back pain decreased from 6 to 3, and BBS score improved to 43 from 13 and K-MBI score 77 from 60. Her MMT marked good from fair plus for right lower extremity and fair plus from

poor plus for left lower extremity. At discharge, she was able to walk independently using a high-walker. In addition, she was able to void and the residual urine was checked below 100cc using a bladder scanner. So, she was discharged home with the foley catheter removed.

Conclusion

We report that early rehabilitation for patient with hematomyelia with low surgical benefit such as old aging is an effective treatment for improving function.

table1. Initial MRI revealed an hematomyelia from C7-T3 level. A T2 weighted sagittal image showing low signal intensity (A). A T1 weighted sagittal image showing high signal intensity (B). Compared to a non-enhanced T1 weighted axial image (C), subtle enhancement was observed in the enhanced T1 weighted axial image (D).

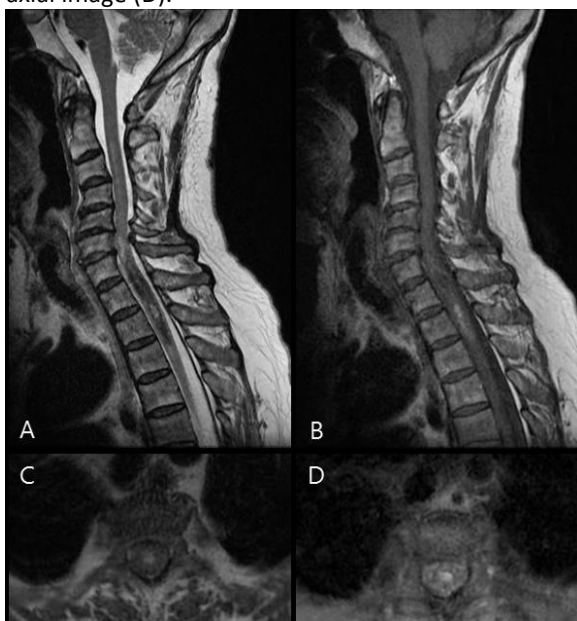


table2. 2 month later MRI revealed that increased low signal intensity on T2 weighted sagittal imaging (A), A T1 weighted sagittal image showing increased high signal intensity (B).

