

Transverse Myelitis Plus Syndrome : A Case report

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Introduction

Transverse myelitis plus syndrome is a subset of transverse myelitis which has features of peripheral nerve involvement, such as diffuse cauda equina enhancement. It should be distinguished from Guillain-Barre syndrome.

Case presentation

A 6-month-old boy presented with weak voice and both lower extremities weakness that progressed over 24 hours. He had upper respiratory infection and diarrhea 1 weeks ago, and these symptoms disappeared when he visited at hospital. He had flaccid paralysis on bilateral lower extremities noted as trace to poor grade, however, no weakness on the upper extremities. Response to painful stimulation decreased on bilateral lower extremities and hypoactive deep tendon reflexes on bilateral lower extremities were also noted. Assessment including blood test, image studies of brain and lumbar spine magnetic resonance image (MRI), cerebrospinal fluid analysis, and electrodiagnostic study were to reveal neurological diseases such as Guillain-Barre syndrome, transverse myelitis and encephalopathy. L-spine MRI showed long segmental path enhancement with subtle T2 hyperintensity of 1st to 5th thoracic spinal cord, which was a feature of transverse myelitis. In addition, there was contrast enhancement with thickening of the cauda equina and nerve roots, which could be suggestive of Guillain-Barre syndrome. Brain MRI and cerebrospinal fluid analysis showed no abnormalities. At 14th hospital day, electrodiagnostic study was performed and it showed preganglionic lesion below cervical level. Initially, he was suggestive of Guillain-Barre syndrome and intravenous immunoglobulin was given immediately from 1st to 5th hospital day. After L-spine MRI and electrodiagnostic study were done, he was diagnosed of transverse myelitis plus syndrome, and steroid pulse therapy from 6th to 10th hospital day and tapering was done. During hospital course, physical therapy including neurodevelopmental treatment and electrical stimulation were done simultaneously. At 1 month after onset of symptom, hypoactive deep tendon reflex on bilateral knee and ankle improved. Muscle power of bilateral lower extremities improved slightly as poor grade and he could not perform antigravity movement. Response to painful stimulation on bilateral lower extremities improved also slightly.

Discussion

Transverse myelitis plus syndrome is atypical form of transverse myelitis which distinguishes from transverse myelitis with pure central nervous system involvement. We report this case of transverse myelitis plus syndrome, which has unique features of transverse myelitis with peripheral involvement.