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Pediatric transverse myelitis with root involvement which mimic GBS : a Case report

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BACKGROUND

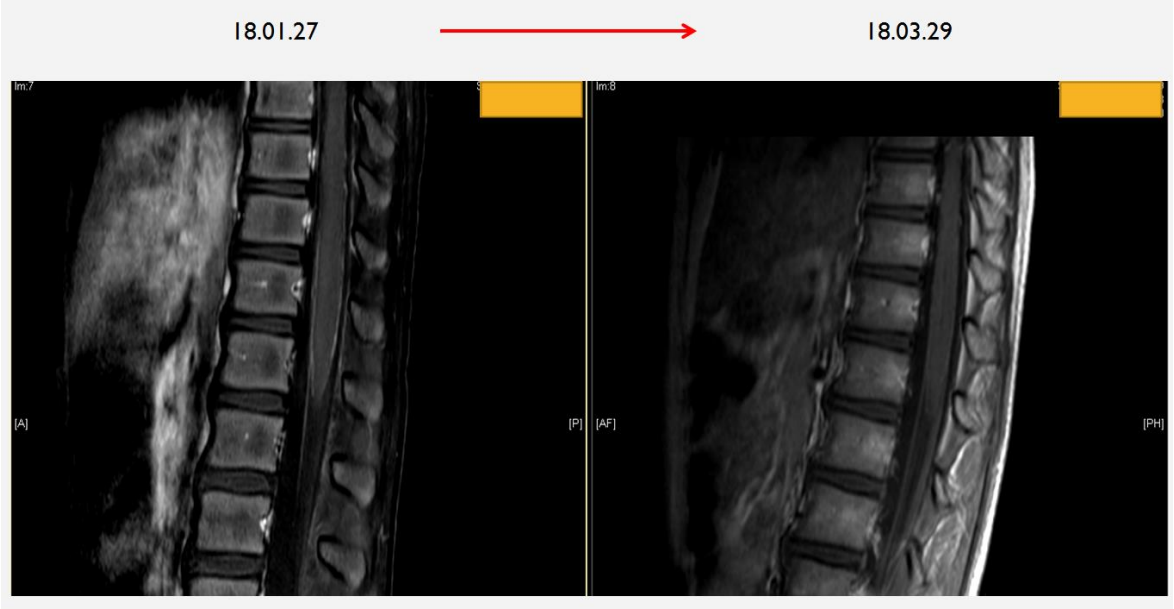
Transverse myelitis(TM) is a rare demyelinating CNS disorder characterized by acute or subacute onset of motor, sensory, and autonomic dysfunction. Children account for 20% of total cases of TM. The extent of demyelination varies among patients so there is a variety of presentations. High-dose intravenous steroids and/or plasma exchange have been used with variable outcomes. Following immunotherapy, pain is the first symptom to resolve, followed by an improvement in motor deficits. Bladder function and sensory deficits may take longest to improve. In general, children with TM have a better outcome than adults.

Case presentation

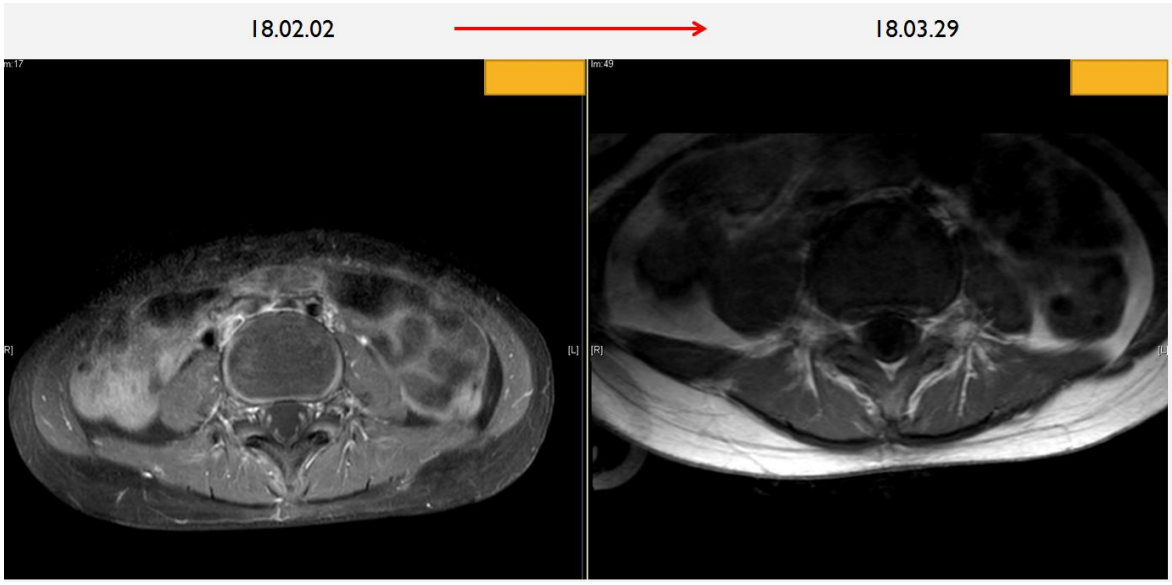
A previous healthy 6 year-old korean girl presented in january 2018 with urinary retention and acute paraparesis. She was treated with pharyngitis a week ago. On initial presentation, she was noted to have severe flaccid weakness in both of her lower extremities with decresed DTR at her patellars and ankles bilaterally. Sensation was preserved. She had an MRI of her spinal cord that showed cord swelling and contrast enhancement in the ventral roots of the cauda equina. Nerve conduction study showed both peroneal axonal motor neuropathy. She was presumptively treated with intravenous immunoglobulin (IVIG) owing to initial concern for motor variant of Guillain-Barré syndrome. After failure to improve, she was transferred to our facility. At february 2018, upper motor neuron sign emerged at her lower extremity. She recieved intravenous methylprednisolone(mPD) for transverse myelitis. After treatment, she was able to improve substantially with strength in her right lower extremity (at least 3/5 in all muscle groups) and more severe weakness in her left lower extremity (generally 2/5). She currently is able to ambulate with minimal asssit. In follow up spine MRI, contrast enhancement in the ventral roots of the cauda equina disappeared. However her voiding dysfunction present on initial admission had not improved. She received laparoscopic ureteroneocystostomy in May 2018 for her vesicoureteral reflux.

Conclusion

We described a special case of pediatric transverse myelitis mimic GBS that has concomitant root involvement. Similar cases may be missed and could account for patients diagnosed with GBS who are labeled as poor responders to IVIG. We insists that transverse myelitis should be considered in all cases of acute flaccid paralysis and spinal cord imaging with regular follow-up is essential for them.



cauda equina 의 root enhancement 를 보이는 MRI 와 methyprednisolone 치료 후 enhancement 가 사라진 MRI



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