Diffuse Large B Cell Lymphoma Presenting as Transverse Myelitis

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Diffuse large B cell lymphoma is the most common type of non-Hodgkin’s lymphoma, accounting for approximately 25% of cases. The diverse manifestations of this disease and frequent extra-nodal involvement of diverse tissues create a diagnostic challenge.

Case
A 64-year-old man presented to the emergency department after four days of leg weakness and difficulty urinating. On exam he was found to have sensory deficits bilaterally. At that time, MRI of the spinal cord showed edema at T10 to T12, and lumbar puncture was negative for infectious agents but showed a high protein level of 67 mg/dL. The patient was believed to have an idiopathic or post-infectious transverse myelitis and was started on high-dose steroids. His weakness and urinary retention improved initially but worsened when the steroids were tapered.

Further work-up was performed, and a brain MRI showed lesions in the brainstem consistent with demyelination. A lumbar puncture was performed that showed five oligoclonal bands. Given the relapsing nature of his symptoms, MRI findings and oligoclonal bands on lumbar puncture, the patient was diagnosed with multiple sclerosis. Steroid therapy was reinitiated and interferon-beta-1a was started. Despite therapy, he continued to have bilateral leg weakness, paresthesia, worsening urinary retention and constipation. An EMG was performed on both legs and showed diffuse axonal sensorimotor polyneuropathy. His steroid dose was increased, and he eventually regained enough strength in his legs to walk using a walker.

Approximately three months after his initial presentation, the patient continued to have urinary retention, constipation and paresthesia in addition to some residual leg weakness. A repeat EMG showed diffuse, bilateral sensorimotor polyneuropathy with primarily axonal involvement. Given his initially acute presentation and his predominately axonal polyneuropathy, he was diagnosed with Guillain-Barre syndrome with spinal cord involvement. The patient was treated with IgG, plasmapheresis and high-dose steroids. After physical therapy, he was able to finally return home with self-catheterization and assistive devices.

A month after returning home, the patient returned to the emergency department with an acute return of weakness to the point of being unable to transfer from his wheelchair. His recurrence of symptoms after treatment with IgG and plasmapheresis in addition to axonal polyneuropathy on EMG prompted a diagnosis of autoimmune inflammatory demyelinating disease. He was started on mycophenolate. Contemporaneously, there was a precipitous rise in his liver function tests with no known etiology. A liver biopsy was performed six months after his initial presentation; it showed diffuse large B cell lymphoma. His neurologic symptoms were determined to be caused by neurolymphomatosis from direct invasion of peripheral nerves and possible lymphoma in the CNS. He was treated with rituximab and dexamethasone until his liver function improved and he was able to receive R-CHOP. His clinical symptoms are improving, and he is again able to ambulate with a walker.

Discussion
This case illustrates the protean presentation of lymphoma and the importance of maintaining a broad differential in patients with unusual symptoms. It is important to remember that lymphoma can arise in almost any tissue and does not always present with typical lymphadenopathy. Recognition of this disease is vital to instituting proper treatment. In this case, treatment with steroids was particularly problematic, as steroids can alter the histopathological characteristics of lymphoma, further complicating the diagnosis.

References