

Subacute parkinsonism as a complication of Lyme disease

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The article describes a 55-year-old patient with a 2-month history of chronic neck pain with progressive marked asthenia. “Clinical examination revealed a dysarthria which disappeared in less than 1 hour, a left upper limb cerebellar ataxia and a bilateral asymmetric mild akineto-hypertonic parkinsonism,” [according to Pische´ from the Department of Neurology, CHRU Strasbourg, Strasbourg Cedex, France.](#) [1]

The second case involves a 63-year-old woman who developed a rapidly deteriorating severe walking disorder over a 6-month period. “Clinical examination revealed lower limbs weakness, increased reflexes, bilateral extensor plantar, and dysuria, as well as a left akineto-hypertonic syndrome.” Facial palsies were also described.

Brain MRIs showed vascular demyelination, typically seen in inflammatory, infectious, drug induced, or paraneoplastic vasculitis conditions.

Physicians suspected both patients suffered from neuroborreliosis. They each presented with an abnormal DaTscan, a specialized imaging technique that allows doctors to capture detailed pictures of the dopamine neurons in your brain.

“In both cases, DaTscan demonstrated apresynaptic dopaminergic denervation which has been associated with striatal ischemic lesions due to Lyme probable vasculitis,” explains Pische´.

The DaTscan (GE) has been used in Parkinson’s disease to “allow physicians to provide accurate clinical management of the patient and prevention of unnecessary medications and procedures,” says Seifert from Florida Atlantic University. [2]

Both patients, presenting with subacute parkinsonism and an abnormal DaTscan, were diagnosed and treated successfully for Lyme disease. “The two patients reported here, who developed, fulfilled the diagnostic criteria for neuroborreliosis: no past history of neuroborreliosis, positive anti-BB antibody index, favorable outcome of neurological signs after specific antibiotic treatment, and absence of other diagnosis,” according to Pische´. [1]

The first case of subacute parkinsonism resolved with a 21-day course of 2 g per day of ceftriaxone without the need for dopaminergic treatment. The second patient required a second 21-day round of ceftriaxone, along with 3 months of corticosteroid therapy (60 mg/day) and Ldopa/carbidopa (300 mg/day).

Acute or subacute parkinsonism, according to the authors, can be a complication of Lyme disease, as demonstrated in these two cases. Therefore, Lyme disease should be discussed when patients living in

endemic areas present with basal ganglia MRI lesions.

“In front of an acute or subacute parkinsonism, especially in endemic region, neuroborreliosis should be discussed in case of associated headache, multisystemic neurological signs, or MRI basal ganglia vasculitis or inflammatory signs.”

The authors cautioned, “Lyme blood or CSF serology should not be asked for, even in endemic region, in case of progressive parkinsonism without any basal ganglia MRI lesions.”

References:

1. Pische G, Koob M, Wirth T et al. Subacute parkinsonism as a complication of Lyme disease. J Neurol, (2017).
2. Seifert KD, Wiener JI. The impact of DaTscan on the diagnosis and management of movement disorders: A retrospective study. Am J Neurodegener Dis, 2(1), 29-34 (2013).

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