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Hashimoto's encephalopathy: A Rare and treatable cause of encephalopathy in general medicine

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Introduction: Hashimoto's Encephalopathy (HE), is a rare autoimmune disease characterized by elevated thyroid antibodies despite normal thyroid function. HE can present with a combination of cognitive dysfunction, seizures, psychiatric symptoms and more rarely, motor abnormalities, leading to frequent misdiagnosis. (1) We describe an atypical case of new diagnosis of HE in an elderly gentleman already on immunosuppression. Given responsiveness to corticosteroids, increasing awareness of HE is crucial.

Case Report: An 83-year-old previously independent male was admitted with progressive cognitive decline, hypersomnolence, limb rigidity and tremors, asymmetric coordination deficits, abnormal gait, limited mobility, and weight loss. He was on methotrexate for treatment of rheumatoid arthritis. A diagnosis of movement disorder was considered but remained atypical. Initial investigations were largely unremarkable, including normal thyroid function tests. CT brain and CT pan scan did not display abnormality. MRI brain and Lumbar Puncture (LP) ruled out other causes of encephalopathy. Thyroid antibody testing revealed highly elevated Anti-TPO (90 IU/ml) and Anti-Tg (>4000 IU/ml), raising suspicion for HE. He was started on high-dose corticosteroids (prednisolone 1 mg/kg), followed by steroid taper. This led to rapid clinical improvement of mobility, cognition and appetite.

Discussion: HE is rare, predominantly affects middle-aged females and has a large spectrum of clinical presentations. (2) In the context of the immunosenescence, the incidence of new autoimmune diseases was thought to be less in the elderly – however emerging evidence states the contrary may be true, with increased autoimmunity occurring with aging. (3, 4) This case was atypical however, as our patient developed HE despite being on immunosuppression, and had prominent motor dysfunction (rarer symptomology for this disease), contributing to diagnostic delay. Corticosteroids remain the first-line treatment.

Conclusion : This case highlights the importance of maintaining clinical suspicion of autoimmune processes and considering HE in elderly patients with unexplained neuropsychiatric and motor symptoms. Early recognition and treatment can significantly improve outcomes, preventing diagnostic delays and morbidity.