



Acute Inflammatory Demyelinating Polyneuropathy (AIDP) Masked by Autoimmune Thyroiditis

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INTRODUCTION

Hashimoto's thyroiditis and Guillain-Barre syndrome (GBS) are autoimmune disorders that are both well-known in their own right. Hashimoto's is one of the most common causes of primary hypothyroidism, and GBS involves immune mediated damage to the peripheral nervous system. The association between the two is a rare clinical entity. This case demonstrates that these entities can occur together and could be related in similar pathophysiology

METHOD

A 37 year old male presented with complaints of bilateral hand and feet numbness for one month. The numbness started in the hands, then involved the feet, and was mostly felt in tips of extremities. He also complained of weakness in arms and legs.

RESULTS & DISCUSSION

Neurology exam showed bilateral patellar, ankle, and biceps hyporeflexia. Muscle strength was 5/5 in all extremities, but decreased grip strength was noted in the hands. Initial lab work including complete blood count, comprehensive metabolic profile and urinalysis were all in normal range. Computerized tomographic scan (CT) head was normal while CT abdomen/pelvis showed hepatic fatty infiltration. Other lab tests including HIV, syphilis, Hepatitis B, Hepatitis C, glycosylated hemoglobin A1c, lipid panel, anti-nuclear antibody, anti-neutrophil cytoplasmic antibodies, serum/urine protein electrophoresis, alcohol level, vitamin B1, B6, folate, copper, and creatine kinase were all negative or within normal range. Lab abnormalities included elevated thyroid stimulating hormone (TSH) of 20.2 mIU/l and low normal B12 level of 289 pg/ml. His triiodothyronine (T3) and thyroxine (T4) hormone levels were in normal range. A thyroid peroxidase antibody level came back as high as 966 IU/ml. A diagnosis of Hashimoto's thyroiditis leading to subclinical hypothyroidism was made. Patient was discharged on vitamin B12 and 112mcg of Synthroid. Instead of getting better, he returned 1 week later with worsening numbness and tingling which was now ascending upward to bilateral knees and elbows. Meanwhile TSH improved to 10 mIU/l and vitamin B12 increased to 1162 pg/ml. A magnetic resonance imaging (MRI) of the cervical/thoracic spine was unremarkable. A lumbar puncture showed negative xanthochromia, 0 WBC, 0 RBC, 0 neutrophils, 0 lymphocytes, 0 monocytes, glucose 63 mg/dl, elevated protein of 57 mg/dl, and culture was negative. Guillain-Barre syndrome was then the working diagnosis, more specifically its most common subtype, acute inflammatory demyelinating polyneuropathy (AIDP). Patient received five days of intravenous immunoglobulins and his symptoms improved. He was then discharged to follow up with an endocrinologist.

CONCLUSION

This subtle presentation of GBS/AIDP masked by Hashimoto's thyroiditis and vitamin B12 deficiency suggests a close association of autoimmune etiology between these disorders. Although rare, endocrinologists should consider this rare association in cases of paresthesias with unexplained symptoms.

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