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Letter to Editor Open Access

Acute Myelopathy Associated with Hashimoto's Disease

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Letter to Editor

Acute Myelopathy associated with Hashimoto's disease is a rare. It is characterized by the presence of elevated antithyroid peroxidize antibody and anti-microsomal antibody. The exact role of the antibody in the genesis of the myelopathy is not clear although a vasculitic process as the basis of Hashimoto's encephalopathy has been proposed [1]. Spine magnetic resonance imaging (MRI) can shows intramedullary high-intensity signals extending involved segments on T2-weighted image with gadolinium enhancement, but may also be normal. It is a highly steroid responsive disease.There is only tree reported cases of Hashimoto's myelopathy until date [2-4]. In this case, we report a patient with an acute myelopathy associated with Hashimoto's disease.

A 36-year-old woman was admitted to the emergency room with acute weakness of both lower limbs. She could no longer walk and Standing was impossible. She also complained of numbness in both lower limbs with tingling and dysesthesia. She also complained of chest tightness under the nipple line. Neurological examination indicated a decrease of pain and temperature sensations on both sides and decrease of position and vibration sensations on the left side of the body below the Th8 level. Her muscle strength was evaluated as 1/5 in the left lower limb and 2/5 in the right lower limb by manual muscle test. The plantar extensor response was present on both sides.

The serum free triiodothyronine, 2.8 pg/ml (normal range 2.4 to 4.5), free thyroxine, 1.22 ng/dl (normal range 0.7 to 1.48) and thyroid stimulating hormone (TSH) concentrations, 4.84 µU/l (normal range 0.4 to 4.0), were normal. The anti-thyroid peroxidase antibodies (TPO) 406 µ/ml (positive>5, 61) and the anti-thyroglobulin antibodies 36 µ/ml (normal range 0.2 to 4.1) were positive. Total creatine kinase, 38 µ/l (normal range: 30-135) was normal. Antiphospholipid antibody was negative and angiotensin converting enzyme levels were normal (10; range 3-52). MRI of the spine did not reveal any cord signal changes in either cervical or dorsal spine. Serological tests for syphilis and HTLV-I were negative. Vitamin B12, folate, ANA and anti-ds-DNA were normal. A lumbar puncture showed normal pressure, four cells, all lymphocytes, with protein 22 mg/dl and sugar 41 mg/dl. No oligoclonal bands were detected in the cerebrospinal fluid (CSF). She was put on intravenous methylprednisolone 1 gm daily for 3 days.

Although the patient is euthyroid, elevated serum antithyroid antibody levels with diffuse swelling of the thyroid suggest the diagnosis of Hashimoto's disease. Both anti-thyroid antibodies have a high level of sensitivity and specificity for the diagnosis of Hashimoto's disease [5]. With treatment, neurological symptoms and antibodies decreased in both CSF and serum. Since the clinical picture is not specific, we cannot completely exclude etiologies other than Hashimoto's disease. Nevertheless, the clinical course of the patient with the laboratory data suggests a probable diagnosis of myelopathy associated with Hashimoto's disease. Myelopathy associated with Hashimoto's disease is rare. To date, three cases are available.

A review of the literature revealed only tree cases where antithyroid antibodies were associated with myelopathy. Azuma et al. [2] reported thoracic myelopathy in a 70-year-old female with a history of Hashimoto's disease. CSF showed elevated anti-thyroglobulin and anti-microsomal antibodies. She made a good recovery with steroid treatment. During the follow-up, she showed features of Hashimoto's encephalopathy and previously unrecognized T2 high signal intensity in the thoracic spinal cord on MRI.

Ishizawa et al. [3] reported a probable case of Hashimoto's myelopathy in a 70-year-old male having elevated anti-TPO antibodies and anti-microsomal antibodies in serum and CSF and high-intensity signal extending thoracic and lumbar segments on T2-weighted image on MRI. Kayal et al. [4] reported a probable case of Hashimoto's Myeloneuropathy in a 36 year old female having elevated anti-TPO antibodies and anti-microsomal antibodies in serum and CSF. MRI of the spine did not reveal any cord signal changes in either cervical or dorsal spine. Age related degenerative changes in the form of osteophytosis, disc desiccation, end plate changes and disc protrusions were present. Nerve conduction studies showed evidence of axonal neuropathy of the common peroneal nerves and posterior tibial nerves.

Hence, our patient had clinical acute myelopathy associated with Hashimoto's disease. Acute Myelopathy as a neurological complication of Hashimoto's disease is a very rare. Diagnosis requires a high degree of suspicion and exclusion of other common causes.

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