Shifting cervical lymphadenopathy in Hashimoto's disease

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ABSTRACT

Hashimoto's disease typically presents with hypothyroidism due to lymphocytic infiltration of the thyroid. Cervical lymphadenopathy has rarely been reported in Hashimoto's disease. We report the unusual association of shifting cervical lymphadenopathy with Hashimoto's disease.

KEYWORDS Cervical lymphadenopathy; Hashimoto's disease; hypothyroidism

The thyroid gland is typically infiltrated with lymphocytes in Hashimoto's disease. Cervical lymphadenopathy in Hashimoto's disease has rarely been reported. In this case report, we present the first reported case of shifting cervical lymphadenopathy associated with Hashimoto's disease.

CASE PRESENTATION

An 18-year-old woman presented with a chief complaint of weight gain of 13 pounds over the past year with associated symptoms of occasional headaches, mild fatigue, dry skin, and irregular menses. She denied fever, tender lymphadenopathy, animal bites, upper respiratory tract infection, or sinus infection. Her family history was significant for hypothyroidism in both parents. The patient had been started on desiccated thyroid 90 mg daily. She denied any history of tobacco, alcohol, or illicit drug use. Physical examination revealed a slightly enlarged thyroid without any discrete nodules; the rest of the physical exam was normal without palpable cervical lymph nodes.

Laboratory determinations revealed a free T₄ level of 0.77 ng/dL (normal 0.93–1.7 ng/dL) and thyroid-stimulating hormone level of 4.09 μ U/mL (normal 0.27–4.2 μ U/mL). A thyroid ultrasound revealed homogenous echogenicity of the thyroid gland with no cysts or masses. The ultrasound did show small lymph nodes in the anterior cervical area, with the largest node on the right measuring 2.2×0.6

cm in neck level II and the largest on the left measuring 1.7×0.6 cm in neck level II. Thyroid peroxidase and anti-thyroglobulin antibodies were 461 IU/mL (<9 IU/mL) and 232 IU/mL (<1 IU/mL), respectively.

Infection and malignancy were unlikely due to the absence of local or systemic manifestations of infection and inflammation along with a nonprogressive course. The patient did not have any laboratory evidence of Epstein-Barr virus infection. She declined a fine-needle aspirate of her cervical lymphadenopathy.

Two months after her initial visit, the patient's course remained stable with persistent elevation of antithyroid antibodies. At 6 months, an ultrasound showed multiple lymph nodes on the right side of the neck, with the largest measuring approximately 1.7×0.4 cm in neck level II. No enlarged lymph nodes were seen on the left side of the neck. At 8 months, she was found to have nontender, palpable small cervical lymphadenopathy on physical examination. At 13 months, ultrasound of the neck revealed small left-sided lymph nodes, with the largest measuring 1.6×0.4 cm in neck level II; no enlarged lymph nodes on the right side of the neck, thyroid nodules, or thyroid masses were detected. At 19 months, her physical examination was normal without thyromegaly or palpable cervical lymphadenopathy bilaterally. The thyroid-stimulating hormone level was now 6.14 U/mL and the free T₄ was normal. Her levothyroxine was increased to 112 μ g once per day. The patient was lost to subsequent follow-up.

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DISCUSSION

Hashimoto thyroiditis is most commonly associated with hypothyroidism. The presence of antibodies to thyroid antigens is found in most patients.¹ Ultrasound of the neck can be normal or show thyroid heterogeneity and/or nodules. Although sometimes overlooked, cervical lymphadenopathy on ultrasound may support a diagnosis of Hashimoto thyroiditis.² This lymphadenopathy is typically found in neck levels II–IV and VI.³ Paratracheal lymph nodes may be involved in Hashimoto's thyroiditis.⁴ The lymphadenopathy locations reported correlate well with the lymphatic drainage of the thyroid gland, suggesting that lymphatic drainage is likely involved in the pathogenesis of lymphadenopathy in Hashimoto's disease. Specifically, nodes in neck levels III, IV, V, and VI collect lymph from the thyroid gland.⁵

The affected lymph nodes in Hashimoto's disease often demonstrate reactive lymphoid hyperplasia.³ Kikuchi-Fujimoto disease is a benign disease with a likely autoimmune etiology that has rarely been associated with Hashimoto's disease. However, it was unlikely in our patient due to the absence of fever or tender cervical lymph nodes.⁶ Other causes of cervical lymphadenopathy such as infection (Epstein-Barr virus and *Bartonella henselae*) and malignancy also need to be ruled out. The clinical resolution of the cervical lymphadenopathy during follow-up in our patient was reassuring. In one study, 9 months of treatment with 100 µg of levothyroxine with 30 mg of prednisone tapered therapy significantly decreased cervical lymphadenopathy.⁷ The role of steroids in this setting remains to be clarified.

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