T cell lymphoma of the thyroid gland in celiac disease

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Most lymphomas of the thyroid gland are almost exclusively classified as the B cell type (1), although a T cell lymphoma has been reported (2). Thyroid lymphomas occur predominately in elderly women, are often associated with chronic thyroiditis and appear to have a reasonably good prognosis (1,3). B cell-type lymphomas are believed to be mucosa-associated lymphomas that have been derived from lymphoid cells (3). T cell lymphomas have been reported in a limited number of anatomical sites, including cutaneous and nasopharyngeal regions (4,5). In addition, these rare peripheral T cell lymphomas have been localized in the intestine and a hepatosplenic variety has been recently proposed in a revised European-American classification of lymphoid neoplasms (6,7). For both the intestinal and hepatosplenic types, linkages with adult celiac disease have also been described (8,9).

Previous reports (10-12), including a study from Vancouver (13), have detailed clinical features of celiac-associated autoimmune thyroid disease, including altered thyroid function and the relatively frequent association with both dermatitis herpetiformis and a complicating intestinal lymphoma. In one investigation (13), thyroid disease was detected in 16 of 96 consecutively evaluated patients with celiac disease, or almost 20%. It was hypothesized that thyroid diseases may be observed commonly in celiac disease, possibly due to shared embryological origins of the thyroid gland and the gastrointestinal tract or common immunopathological features.

In the present report, a woman with biopsy-defined celiac disease and a prior diagnosis of chronic thyroiditis with biochemical evidence of thyroid gland hypofunction developed a diffusely enlarged thyroid gland. Subsequent biopsies revealed infiltration with atypical lymphoid cells characterized with immunohistochemical studies as a T cell type lymphoma (13).
Although chronic thyroiditis may be complicated by lymphoma, a T cell type lymphoma in the setting of celiac disease without evidence of intestinal lymphoma is unique.

**CASE PRESENTATION**

A 66-year-old woman with dermatitis herpetiformis was initially evaluated in 1994 for diarrhea and weight loss. Small intestinal biopsies showed a severe ‘flat’ mucosal lesion, typical of untreated celiac disease, and she was treated with a gluten-free diet alone. Her diarrhea resolved and she regained 10 kg. Repeat small intestinal biopsies in 1995 showed normalization of the villous structure. In 1996, thyroid gland hypofunction was suggested by an increased level of thyroid stimulating hormone. Thyroid microsomal antibodies were strongly positive – 1:25,600. Thyroid replacement therapy was not administered. She had no gastrointestinal symptoms, and results of a small intestinal barium study were normal. In 1997, she was re-evaluated, and a diffusely enlarged thyroid gland was initially detected. No peripheral lymphadenopathy was evident. Open surgical biopsy revealed diffuse infiltration of the thyroid gland with atypical lymphoid cells (Figure 1). Immunophenotyping was positive for CD3, a marker of T cell differentiation. Two weeks later after diagnosis, she suffered a fatal myocardial infarction.

**REFERENCES**
