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Coeliac disease and goitre

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Summary

Two cases of coeliac disease associated with thyroid enlargement are presented. One had a large simple adenomatous goitre which was removed surgically and the other had histological confirmation of lymphadenoma (Hashimoto's disease).

Introduction

There have been a number of recent reports of cases in which coeliac disease has been associated with another disease complex. Thus coeliac disease has been reported in association with diabetes (Walker-Smith, Vines and Grigor, 1969), Sjögren's syndrome (Maclaurin, Matthews and Kilpatrick, 1972; Pittman and Holub, 1965), thyroiditis (Maclaurin *et al.*, 1972) and bird fancier's lung (Berrill *et al.*, 1975). Two cases in which thyroid disease was associated with coeliac disease are now described.

Case 1

A 55-year-old unmarried woman who was born and lived all her life in an area endemic for goitre was

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admitted to hospital with weakness, loss of appetite, diarrhoea and weight-loss. She had had a large multinodular goitre for many years.

On examination she was in mild congestive heart failure with fast atrial fibrillation. She was clinically anaemic and investigations showed Hb 4 g/100 ml; WCC 1900/mm³; platelet count $4.6 \times 10^4/\text{mm}^3$; reticulocyte count 0.5%; film reported as showing macrocytosis; protein-bound iodine 460 mmol/l (normal range 300–600); bone marrow showed a megaloblastic anaemia; serum vitamin B₁₂ 30 pg/ml (normal range 150–900); serum folic acid 2.3 ng/ml (normal range 3.5–24.0); serum carotene 15 mg/100 ml (normal 60–120); faecal fats were normal; D-xylose excretion was only 1.6 g of a 25-g dose in 5 hr; jejunal biopsy showed an atrophic mucosa with prominence of lymphoid tissue and subtotal villous atrophy.

A diagnosis of coeliac disease was made and she was started on a gluten-free diet. With treatment of the anaemia her general condition improved sufficiently for her to have a partial thyroidectomy and a total of 515 g of thyroid tissue was removed which was shown on histology to be an adenomatous

goitre. She subsequently became mildly hypothyroid and has been maintained on L-thyroxine, 0.15 mg daily. When last seen her weight had increased from 42 to 50 kg.

Case 2

A female, then aged 52 years, presented in 1965 with weight-loss, weakness and anaemia and it was noted that her thyroid was not enlarged and she had a mild anaemia with a Hb of 11 g/100 ml.

In 1968 she had been referred to a surgical clinic with a lump in her neck. On examination she was found to be mildly anaemic and had a soft swelling of the right lobe of her thyroid. She had a partial thyroidectomy for a thyroid adenoma and on histological examination it was found to be a lymphadenoma (Hashimoto's disease).

She presented again in 1974 complaining of lack of energy and general malaise. She denied any bowel disturbance. On examination she was thin, weighing 53 kg. Hb 12 g/100 ml; WCC 7400/mm³. Differential WCC and platelet count normal; red cells showed slight macrocytosis; protein-bound iodine, Thyopac-3 uptake and free thyroxine index, all normal; serum calcium 1.8 mmol/l (normal range 2.1–2.6); serum carotene normal; serum vitamin B₁₂ 105 pg/ml (normal range 150–900); folic acid 1.8 ng/ml (normal range 3.5–24.0); occult blood negative in three specimens; Schilling test abnormal both with and without intrinsic factor; faecal fats normal; jejunal biopsy showed a flat mucosa of subtotal villous atrophy.

A diagnosis of coeliac disease was made and there was a good clinical and laboratory response to a gluten-free diet.

Discussion

Case 1 is of interest in that she lived in an area where goitre is prevalent and it may be that her iodine deficiency was made more severe by her malabsorption. Several other cases with large goitres have been studied and although they showed evidence of some vitamin deficiency such as low calcium folate and carotene they had normal jejunal biopsies.

The second patient had vague symptoms of ill-health for many years probably due to her coeliac disease but exacerbated by the development of Hashimoto's thyroiditis. The development of Hashimoto's thyroiditis may be coincidental but it is possible that whatever the immune disturbance that occurs in Hashimoto's disease also occurs in some patients with coeliac disease.

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