Thyrotoxic Steatorrhoea

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Diarrhoea is a common symptom of thyrotoxicosis, but it is rarely accompanied by steatorrhoea (Hawkins, 1963). We report here details of a patient whose presenting symptoms were diarrhoea, with fatty stools and loss of weight, and who underwent extensive investigation of her alimentary tract before hyperthyroidism was recognized. The histological appearance of the jejunal mucosa was abnormal but probably of no pathological significance. After subtotal thyroidectomy her diarrhoea and steatorrhoea were completely resolved.

CASE REPORT

The patient, a 27-year-old married female Ghanaian with a 5-year-old son, was admitted to hospital in December 1965. She had worked as a nurse and as a cook since her arrival in this country with her student husband two years previously.

She complained of intermittent diarrhoea of three months' duration, lasting for two to three days at a time, with remissions of up to one week. During the attacks her stools were semi-solid, pale, bulky, offensive, and difficult to flush away; she had up to six bowel movements daily, often associated with lower abdominal colic. She had not noticed blood in the stool.

Direct inquiry elicited a loss of weight of about 10 kg. during the previous eight months. Her appetite had varied from poor to very good. She had been sleeping badly and suffered from frequent headaches. Her menstrual loss had become scanty during the past year.

Her family history was good and her past history free of serious illness.

Clinical examination showed a wasted, tense, and anxious negress of pleasant disposition and high intelligence. Axillary sweating was evident but her palms were dry. There was minimal bilateral

FIG. 1.—Daily faecal fat excretion before treatment, during preoperative iodide medication, and after thyroidectomy. The dotted line indicates upper normal limit of 7 g.

FIG. 2.—Jejunal biopsy showing abnormal shape of the villi.

enlargement of the thyroid gland, over which a faint bruit could be heard, but there were no eye signs or finger tremor. Brachial blood pressure was 135/70 mm. Hg and the pulse 90, without special characteristics. The heart was not enlarged. A soft ejection murmur was audible in the pulmonary area. The respiratory and nervous systems were normal. The only abdominal abnormality was slight tenderness in the left iliac fossa.

Special investigations were directed primarily towards the alimentary tract. Proctosigmoidoscopy and barium enema appearances were normal, as were a barium meal and follow-through examination of the small intestine, save for the arrival of the contrast medium in the colon within 30 minutes of its ingestion. Many faecal specimens were examined and found to contain no excess mucus, red cells, pus cells, or pathogens; food residues were identified in the liquid stools, which smelt strongly of butyric acid. Faecal fat excretion proved to be greatly increased, up to 32 g. daily (Fig. 1).

An intestinal biopsy was carried out, and the microscopical appearances are shown in Fig. 2. Most of the villi present were shorter and broader than normal, and there were areas of flat mucosa devoid of villi. The epithelium was tall columnar with basal nuclei and some vacuolation of the cytoplasm. There was no increase in cellularity of the mucosa.

Xylose-excretion and lactose-tolerance tests yielded normal results and the serum iron was 69 μ g./100 ml. Serum urea and electrolytes were normal, as were also the blood count, E.S.R., and chest x-ray picture.

At this stage the possibility of hyperthyroidism was considered. Investigation adequately confirmed this diagnosis, her B.M.R. being 112% above normal, serum protein-bound iodine 15.6 μ g./100 ml., and radioiodine uptake 85% of the tracer dose at 24 hours with an effective half-life of 4.5 days.

After preliminary iodide therapy, which had little effect on the faecal fat excretion, partial thyroidectomy was carried out. The diarrhoea and steatorrhoea now promptly abated (Fig. 1). Histological examination of the removed portion of gland showed appearances of iodide-treated thyrotoxicosis. Ten weeks after the operation she was well, free from diarrhoea, and 6 kg. heavier. Her menstrual loss had increased. Her serum protein-bound iodine was 8.3 μ g./100 ml.

COMMENT

Though some increase in faecal fat excretion may be common in thyrotoxicosis, presentation as frank steatorrhoea must be rare. Eye signs or tremor were prominent features in the nine patients studied by Cook, Nassim, and Collins (1959), and only one patient excreted faecal fat in excess of 10 g. daily. In the case reported here the presence of hyperthyroidism was not considered until investigation of the diarrhoea had proceeded to the stage of intestinal biopsy. The appearances of the latter confused rather than clarified the issue until it was realized that they were explicable on the basis of a normal racial variation (Rubin and Dobbins, 1965).

The patient did not appear to be ingesting excessive quantities of dietary fat prior to operation, and the marked intestinal hurry demonstrated by the barium follow-through examination was sufficient to account for her steatorrhoea. After thyroidectomy the diarrhoea ceased and the faecal fat excretion fell promptly to normal, though she took a full ward diet after the second postoperative day.

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