Case report

Weight loss caused by a thalamic astrocytoma

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SUMMARY We describe a case presenting as weight loss without neurological signs, caused by a thalamic astrocytoma.

Case report

A 43 year old woman had noted a 24 kg weight loss in a year. In 1978 she developed non-specific diarrhoea with malaise and depression. She had lived in Thailand from 1972-5 and moved to Sweden two years before presentation in 1982, her weight having dropped from 60 kg to 36 kg. She had also noted brief and infrequent episodes of diplopia, although a neurologist and ophthalmologist could find no abnormality. She was extensively investigated with numerous normal investigations, including routine haematology and biochemical tests, plasma protein electrophoresis, auto-antibodies, rheumatoid factor, Australia antigen, vitamin B12, thyroid function tests, diurnal cortisol, barium enema, small bowel enema, chest radiograph, intravenous urogram and gastroscopy. Stool examinations for bacteria and parasites were also normal. The serum folate was raised at 34 mg/ml and serum zinc low at 10 μ mol/l. The glycocholate breath test was borderline and jejunal biopsy showed mild non-specific partial villous atrophy. A differential diagnosis of contaminated bowel syndrome or coeliac disease was made and treatment with a gluten free diet and a course of metronidazole initiated. Six months later her bowels were normal, and re-introduction of gluten had no effect. There was no change in the jejunal biopsy.

She was admitted to Westminster Hospital in February 1983. On examination she was emaciated and now there was an afferent pupillary defect in the right eye, bilateral ptosis with overactive frontalis muscles, ophthalmoplegia for upward and

downward gaze, abnormal convergence and ataxia on heel toe walking. Additional gastrointestinal investigations which were normal in the UK included a Schilling Test, five day faecal fats, upper abdominal ultrasound, computed tomography of the abdomen, upper gastrointestinal endoscopy and multiple jejunal biopsies and liver biopsy. In addition a full endocrine investigation was normal. Neurological investigation revealed abnormal visual evoked potentials with markedly prolonged latency and low amplitude. The electroencephalogram was abnormal bilaterally. CAT scan of the brain was abnormal (Figure).

A possible diagnosis of cerebral Whipples disease was made and a course of tetracycline was started. She continued to deteriorate, however, and lost more weight with worsening diplopia, ataxia, and lethargy. A lumbar puncture showed 9 lymphocytes/mm³, normal protein and sugar, with no organisms or malignant cells. She was transferred to a neurosurgical unit for insertion of ventricular-peritoneal shunt, and stereotactic biopsy under CT control. The histology showed astrocytoma. Radiotherapy and dexamethasone were started and she improved sufficiently to leave hospital. No gastrointestinal or endocrine cause of the patient's weight loss had been found. Initially a diagnosis of cerebral Whipples disease was entertained in this patient, as very similar neurological signs have previously been described in this condition.¹ The cerebral lesion was difficult to biopsy and Whipples disease might have explained the massive weight loss and was treatable. The patient's condition continued to deteriorate, however, and brain biopsy made the diagnosis.

Thalamic astrocytomas are rare accounting for 1-7% of gliomas.² The neurological signs are compatible with the site of tumour, but weight loss has not been described with lesions in this region.

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Figure CT scan of brain showing constant enhancing mass in region of left thalamus displacing third ventricle and pineal and causing obstructive hydrocephalus.

Ablation of the lateral hypothalamus in the rat causes aphagia³ and weight loss, though desire to feed is maintained. In 1951 Russel⁴ described the diencephalic syndrome in infants, consisting of rapid weight loss and nystagmus, with a normal mental state, in patients with astrocytomas in the region of

the anterior hypothalamus and third ventricle. In 1965 Smith *et al*⁵ reviewed 32 such cases of which 26 had low grade astrocytomas in this region. They comment on normal endocrine and gastroenterological investigations and describe 'vomiting and diarrhoea not severe enough to explain emaciation'. We suggest that the weight loss in this patient was because of the thalamic tumour, and that there are features in common with the diencephalic syndrome of infancy.

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