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Pituitary coma with continuing menstruation

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Summary

A case of pituitary coma with continuing menstruation is presented. This association is extremely rare, but a history of recent menstrual periods does not exclude advanced hypopituitarism from the differential diagnosis of severe hyponatraemia.

Introduction

The pattern of hormone deficiency in pituitary failure is variable and the occurrence of deficiencies of single hormones is well recognized (Hall, 1974). Although menstrual cycles and even pregnancy are known to occur in patients with partial hypopituitarism (Simpson, 1959), gonadotrophin loss is usually an early if not the first feature of most patients with hypopituitarism (Sheehan, 1939). This is a report of a patient, presenting with coma due to advanced pituitary failure, who was still menstruating.

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Case report

A 50-year-old housewife was admitted to hospital in July 1976 48 hr after an episode of unconsciousness lasting several hours from which she had made a spontaneous recovery. A previous attack had occurred in September 1975. Following both attacks, which were unrelated to fasting, she had noticed a dull frontal headache and sweating. After the first attack, she had been seen in out-patients and found to have a fasting blood sugar of 2.7 mmol/l (43 mg/dl) with normal plasma electrolytes. She had felt generally unwell since the death of her husband 4 years previously, and for 2 years had noticed increasing lethargy.

She had had normal pregnancies and had lactated normally over 24 and 16 years previously. She had been under regular review in gynaecological out-patients for vaginal prolapse since 1973 and there is a well documented account of her menstrual history. During the 12 months before admission she had had

six periods lasting 4 to 5 days, the last one being just a few days before admission.

On examination she was drowsy with an oral temperature of 35.8°C, skin pallor and no pubic or axillary hair. The blood pressure was 120/70 mmHg recumbent, 110/80 mmHg standing and the fundi and visual fields were normal.

Investigations revealed: plasma sodium 112 mmol/l, potassium 3.9 mmol/l, bicarbonate 22 mmol/l, urea 2 mmol/l, osmolality 230 mOsm/kg. 9 a.m. plasma cortisol was 75 nmol/l (normal range 165–700) and rose to 420 nmol/l after a short tetracosactrin test. Fasting (9.0 a.m.) plasma adrenocorticotrophin (ACTH) was less than 5 ng/l (normal <10–80). After a 3-day ACTH stimulation test the plasma cortisol level was 1033 nmol/l (normal range), results which demonstrated secondary adrenal failure.

Her symptoms rapidly improved following treatment with intravenous hydrocortisone and saline, and the electrolyte abnormalities reverted to normal. Serum total thyroxine was 102 nmol/l (normal range, 55–155) but there was no rise in serum thyroid stimulating hormone (TSH) following intravenous injection of 200 µg of thyrotrophin releasing hormone (TRH). An insulin tolerance test failed to produce any rise in plasma cortisol, whilst growth hormone rose from 1.2 mu./l to only 2.7 mu./l at thirty minutes despite adequate hypoglycaemia. The serum levels of follicle stimulating hormone (FSH) and luteinising hormone (LH) were 5.2 u./l and 3.2 u./l respectively, which are consistent with intact ovarian function.

Nine months after her last menstrual period, which had been just before admission, serum FSH and LH

were 3.4 u./l and 2.6 u./l respectively, which are low for post-menopausal women (normal post-menopausal levels 30–120 and 17–45 u./l respectively). Serum prolactin concentration was 160 mu./l (normal, 40–445). Serum thyroxine was 64 nmol/l and a further TRH test gave no TSH response.

No cause for her hypopituitarism has been found, chest X-ray, pituitary fossa tomography, perimetry and auto-immune serology tests being normal. Recently (1977) she developed iron deficiency anaemia, and was found to have a gastric ulcer.

Discussion

This patient now has panhypopituitarism of unknown aetiology. However, at the time of presentation in pituitary coma, gonadotrophin function appeared intact, with regular two-monthly menstrual periods. The picture at that time was one of severe hyponatraemia, and the presence of menstruation was thought to make the diagnosis of panhypopituitarism unlikely. However this proved not to be the case.

The only pointer to pituitary disease was absence of body hair associated with pallor of the skin. Continuing menstruation with pituitary coma must be a rare occurrence as a literature search has failed to find similar case reports.

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Normal alkaline phosphatase in primary biliary cirrhosis

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Summary

A patient with primary biliary cirrhosis is described. Throughout her illness the serum alkaline phosphatase remained normal and this unique feature emphasizes the importance of histology in diagnosing the disease.

Introduction

Primary biliary cirrhosis (PBC) is associated with

a raised serum alkaline phosphatase level (Sherlock and Scheuer, 1973). A patient is described in whom the level of this enzyme remained normal throughout her long illness.

Case report

A Caucasian patient presented in 1963 at the age of 56 years with a transient episode of tiredness and