Pituitary Microadenoma Presenting as Panic Attacks

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A woman with pituitary microadenoma presented with panic attacks. This case illustrates the need both for routine medical screening of psychiatric patients and for psychiatrists to remain aware of the clinical features of medical syndromes.

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Brain tumours can produce a variety of psychiatric symptoms and can occur without neurological symptoms or focal neurological signs. Occasionally, the early manifestations of a tumour may consist of psychiatric symptoms and the patient may first come to the attention of the psychiatrist. This emphasises the importance of medical experience in the mental health professional so that appropriate treatment of underlying pathology is not delayed.

One retrospective study of psychiatric patients admitted to hospital found that in those patients with brain tumour the diagnosis is usually made only after definite neurological symptoms have occurred (Remington & Rubert, 1962). Another study estimated that approximately one out of every 200 patients admitted to a psychiatric unit had cerebral tumours (Parry, 1968). In surveys of large numbers of patients with brain tumours, psychological symptoms occurred in the majority at some time during their illness (Keschner *et al*, 1938). One more recent report describes several patients with such tumours who presented with psychiatric symptoms but virtually no neurological changes (Binder, 1983). The following case illustrates a patient with pituitary microadenoma who presented with psychiatric symptoms.

Case report

The patient was a 26-year-old, married, white woman. She presented for an evaluation of panic attacks. She denied any history of seizures or heart disease. She complained of approximately six months of mild low mood, fatigue, and weight gain (7 kg) before the onset of her panic attacks. She also reported some irregularity in her menstrual cycle although she had a history of irregularity. The patient had been seen for a routine physical examination several months earlier and had no abnormal findings. Laboratory values at that time were essentially unremarkable, including normal complete blood count, normal electrolytes and normal thyroid function tests. She reported frequent episodes of intense anxiety accompanied by tachycardia, shortness of breath, palpitations and a feeling of dread over the previous two months. Consciousness and vision remained normal. A detailed neurological examination found her to be without focal signs or neurological abnormality. Her blood pressure was 130/85 mmHg. Some accumulation of fat was noted in the intrascapular region. Her family history was negative for psychiatric illness. The diagnosis of panic attack was made. The patient was treated with low doses of alprazolam to reduce her anxiety.

Approximately two days after her evaluation, the patient presented at the emergency room in a state of acute panic. Her condition was so severe that she was admitted for observation. While in the hospital, routine laboratory tests revealed a potassium level of 2.7 mEq/l. This test is regularly done on all patients at our hospital. Her dexamethasone-suppression test revealed a morning cortisol level of 40 μg/dl. Subsequently, a baseline urinary free cortisol was found to be 749 μg/g creatinine/24-hour urine. This free cortisol did not suppress with 2 mg of dexamethasone. Serum adrenocorticotrophic hormone was 55 pg/ml. Repeated testing of blood glucose, thyroxine and thyroid-stimulating hormone were normal. It was felt that the patient's findings were consistent with Cushing's syndrome. Abdominal computerised tomography (CT) revealed no pathology of the adrenal glands. Initial CT of the pituitary was negative. Several weeks later, a thin-cut CT of the sella turcica revealed a microadenoma of the left-anterior lobe of the pituitary. Her in-patient diagnosis was Cushing's syndrome with panic attacks.

The patient was subsequently admitted for trans-sphenoidal resection of the pituitary. She was put on replacement hormones and subsequently did well. The episodes of panic and anxiety ceased following surgery and the patient has remained free of symptoms since that time (18 months). Her blood pressure at follow-up was 130/79 mmHg.

Discussion

Psychiatric symptoms are not uncommon in patients with brain tumour (Uribe, 1986). Pituitary tumours account for approximately 10% of all cerebral tumours in neurological patients and for about 13% of the cerebral tumours found in psychiatric patients (Sumner, 1969). These tumours have been associated with various forms of psychopathology (Davison & Bagley, 1969).

In cases of pituitary tumour, psychiatric symptoms may be attributable to endocrine disturbances. It is then difficult to judge whether the patients' psychopathology would be due to hormonal changes

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or to the effects of the lesion interfering with central nervous system activity more directly. There is widely held agreement that in some cases, the psychiatric distress is directly due to extensions of tumours beyond the sella turcica (Lishman, 1978). Similarly, her psychiatric disturbance was not due to obstruction of the circulation of cerebral spinal fluid, since her tumour was very small and there was no evidence of increased intracranial pressure.

This individual did not report any social stressors which could account for her low mood or anxiety. Her negative family history, while not accounting for all genetic input, would suggest that she was not a strong risk for familial endogenous depression. The lack of precipitants combined with menstrual irregularity, weight gain and increased intrascapular fat caused clinical suspicion that her psychiatric complaints were related to an endocrinological problem. Although it would be premature to indicate a causality between her tumour and her psychiatric symptoms, the patient's history and the large body of literature concerning endocrinological disturbances in mental illness do provide modest convergent evidence in favour of an organic contribution to her illness.

The availability of routine screening of serum electrolytes and urea was important to this situation. Since the patient had few physical complaints and was seen by her regular physician four months before her psychiatric contact, one could have easily omitted blood chemistry from her evaluation. This omission could have led to tragic consequences. Although this patient had no primary physical complaints, her medical condition was quite serious. Pituitary tumours are merely a small part of the medical conditions which sometimes present as psychopathology. This case would not have come to proper treatment so quickly had it not been for the distressing nature of her psychiatric symptoms. This situation illustrates the importance of routine medical screening for psychiatric patients. It is unfortunate that cost-containment measures seek to limit the use of routine testing in patients without manifest physical distress. These circumstances emphasise the need for psychiatrists to practise good medicine and remain aware of the clinical features of medical syndromes. Further evaluation of the association between pituitary function and psychiatric disease is recommended.

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Systemic Lupus Erythematosus in a Woman with Mental Handicap

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A woman with a mental handicap developed SLE. This magnified the level of her handicap, and because of her difficulties in giving a history, mildly abnormal results of tests in any one system were dismissed over long periods of time. This resulted in very late diagnosis of a potentially treatable disease.

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Systemic lupus erythematosus (SLE) is a member of the collagen or connective-tissue diseases, as are rheumatoid arthritis, dermatomyositis, scleroderma and polyarteritis nodosa. A change in our conception of the course of SLE has come about as a result of more sensitive diagnostic methods. The disorder, which is more common than was previously thought, has an incidence of about 4.2 per 100 000 population (Ridley *et al*, 1988). It does not necessarily have a rapid and fulminant course as was previously believed (Hughes, 1979),

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