

## Depressive disorder due to craniopharyngioma

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**Secondary causes of depression are legion, and must always be considered in patients presenting with features atypical of primary idiopathic depressive disorder. The case described is that of a middle-aged woman presenting initially with a major depressive disorder who was subsequently found to have a craniopharyngioma, leading to a revised diagnosis of mood disorder due to the tumour. Some features of the presentation might have led to earlier diagnosis had their localizing significance been recognized. Diencephalic lesions should always be considered in patients presenting with the hypersomnic-hyperphagic variant of depressive disorder.**

### CASE HISTORY

A 51-year-old woman presented to an outpatient department with a 3 week history of depressed mood, anhedonia and impairment of concentration, with diurnal fluctuation of symptoms. She had become socially withdrawn. Over the same period she reported hypersomnolence (sleeping 18 h per day), increased appetite and weight gain. Two adverse life events were noted at the time of presentation.

She gave a past psychiatric history of recurrent though infrequent episodes of depressed mood throughout adult life. These episodes had been related to psychosocial stressors, were characterized by anorexia and insomnia, had never required inpatient treatment and had responded to tricyclic antidepressants.

The patient reported a normal birth and development milestones. She was of above average academic achievement and worked in a paramedical discipline. She had been admitted on one occasion for alcohol detoxification approximately 15 years prior to the current illness, but had not misused alcohol in the intervening period. There was no history of illicit substance misuse, past medical history of note, nor family history of psychiatric disorder. The patient was divorced, living with her current partner, and had two adult children.

At the time of initial assessment she exhibited a depressed affect with agitation and reduced rate of speech production. There were no abnormal beliefs or experiences. She was unable to comply with tests of attention, but performed accurately on clinical tests of memory. She was fully orientated for time, place and person and retained

insight into her condition. Physical examination and routine blood investigations were normal.

The patient was commenced on lofepramine but failed to respond at full doses. She was admitted to hospital 2 months later with persistent depression. She failed to respond to amitriptyline at a dose of 200 mg per day. During that admission she was again noted to be hypersomnolent and hyperphagic. She was eventually discharged from hospital following poor compliance with rehabilitation.

She was admitted to another unit 5 months after her initial presentation. The admission followed an assault upon a relative. The patient was found to be labile, aggressive, agitated, overactive and sexually disinhibited. She reported additional symptoms of polydipsia and polyuria. On that occasion a fluctuating level of consciousness was noted. Physical examination revealed bitemporal hemianopia to red light and pale optic discs, but no other abnormality. Blood investigations were normal. Electroencephalography demonstrated excess theta activity. Magnetic resonance imaging (MRI) of the brain indicated a hypothalamic lesion with a cystic area filling the third ventricle (Figure 1). Incomplete surgical excision was performed. Histopathological analysis revealed the mass to be a craniopharyngioma.

Post-operatively, the patient required treatment with desmopressin (for diabetes insipidus) and radiotherapy (to the residual tumour). She suffered a depressive relapse which responded to amitriptyline (200 mg/day).

At 9 months post-partial excision of the craniopharyngioma the patient is euthymic but suffers a degree of enduring cognitive impairment. Psychometry reveals intellectual deterioration relative to her estimated premorbid level of functioning (according to the National Adult Reading Test). Her WAIS-R (Wechsler Adult Intelligence Scale, 1981 Revision) is currently 2 standard deviations below her optimal. Memory deficits are apparent:

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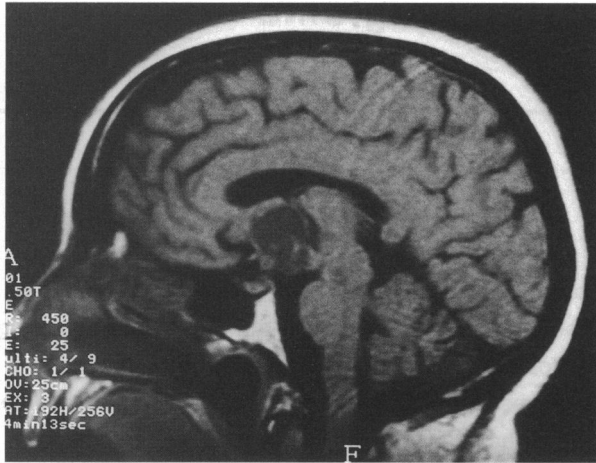


Figure 1 Magnetic resonance imaging scan showing a sagittal section through a diencephalic lesion. Histology revealed this to be a craniopharyngioma

the patient's immediate auditory working memory (Digit Span) is impaired, as are registration, immediate and delayed recall of a short story (low average). There is impaired perceptual analysis of visual material, and abnormalities of visuospatial conceptualization.

## DISCUSSION

The case described is that of woman who on initial presentation met criteria for a primary major depressive disorder<sup>1</sup>. However, a number of features point to the possibility of a diencephalic lesion. Marked hypersomnolence and hyperphagia were present and persistent. They failed to respond to treatment. The patient's previous illnesses were characterized by anorexia and insomnia. Likewise, her depression of mood was both quantitatively and qualitatively different from past episodes. It was more severe than previously, requiring inpatient admission, and did not respond to antidepressant medication despite having done so in the past. At this stage, diagnosis of the general medical disorder would have allowed for elective surgery and would have prevented the subsequent course of events, in which the patient re-presented with organic brain features.

The hypersomnia found with diencephalic lesions is an excess of normal sleep, with the patient exhibiting clear consciousness upon waking. This is in contrast to the somnolence of delirium due to raised intracranial pressure, where the patient will usually exhibit an altered level of conscious awareness and attentional deficits upon waking<sup>2</sup>.

Marked hypersomnolence as exhibited by our case may be regarded as a localizing sign for a diencephalic lesion<sup>3</sup>. It

is attributable to involvement of the posterior hypothalamus and closely related areas. Hyperphagia is also indicative of hypothalamic disorder. Reeves and Plum<sup>4</sup> described this feature in association with a hypothalamic hamartoma.

Different forms of psychiatric disturbance have been described in association with diencephalic lesions such as craniopharyngiomas<sup>3</sup>, including depression<sup>5</sup>, mania<sup>6</sup>, and paranoia<sup>7</sup>.

The memory impairment associated with diencephalic tumours particularly applies to recent events and new learning<sup>8</sup>, i.e. short-term memory. Williams and Pennybacker<sup>9</sup> in a study of 180 cases of cerebral tumours found 32 cases of craniopharyngioma. Relative to the other tumours, the latter showed excessive short-term memory disturbance, especially when the posterior hypothalamus and third ventricle were affected. Russell and Pennybacker<sup>10</sup> have reported dementia, with failing memory and intellect, in patients with craniopharyngiomas coming to light only in middle or old age.

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