

SIADH in this patient, consideration should be given to the possibility that both the IADH and the psychosis were manifestations of a common disturbance of central nervous system (CNS) function (Raskind, Orenstein and Christopher, 1975). Second, antidiuretic hormone (ADH) *per se* may have been a factor in the development of psychiatric symptoms: Arginine vasopressin has been reported to influence various behavioural processes (Gold, Goodwin and Reus, 1978); significantly raised ADH levels have been reported in acutely psychotic subjects who had normal levels of serum sodium and osmolality (Raskind *et al*, 1978); and at the time of psychotic episodes the ADH level in Lever and Stansfield's patient was either inappropriately raised or greater than normal. Finally, although they were not being taken at the same time, phenothiazines could still have contributed to the elevated ADH levels in the first of this patient's psychotic episodes: these drugs may remain bound to CNS tissue many weeks after systematic withdrawal (Jose, Barton and Perez-Cruet, 1979); and IADH may occur as a late phenomenon following the cessation of phenothiazine therapy (Smith and Clark, 1980).

Whatever the precise mechanisms involved, Lever and Stansfield's report is apposite, for studies on the relationship between ADH and psychosis may further our understanding of psychotic disorders.

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... AND WATER INTOXICATION

DEAR SIR,

Recently Addison's disease has been reported in association with psychosis and inappropriate antidiuretic hormone secretion (*Journal*, October, 1983, *143*, 406-10). While this particular combination may be rare, disorders of fluid balance in psychiatric patients are more common than at present assumed (Blum and Friedland, 1983).

The syndrome of inappropriate antidiuretic hormone (IADH) occurs when ADH is provoked, not by the usual osmotic stimuli, but by other factors such as drugs, stress, and infection. This hormone excess leads to water retention and eventually water intoxication. Water intoxication may very rarely be produced by excessive intake but psychogenic polydipsia will not of itself lead to water retention as long as normal homeostatic mechanisms are present and able to cope with the fluid load.

We are particularly concerned with the misdiagnosis or underdiagnosis of water intoxication in chronic schizophrenia. Since the fluid retention is easily treatable and can be fatal if left untreated, it is important for psychiatrists to be aware of this possibility.

Water intoxication with or without significant IADH usually presents as a neurological disorder—headaches, lassitude, lethargy and vomiting progressing to seizures, coma and rigidity. Some of the early features can resemble the negative symptoms of schizophrenia but we are aware of two schizophrenics who were misdiagnosed in the advanced stages of the condition.

One patient was admitted to the medical ward with epileptic seizures and discharged undiagnosed, the other presented to a Casualty Department in coma and was transferred to a neurological unit as a head injury. In both cases the history did not help to establish the correct diagnosis. Both these patients presented during the heatwave this summer when any increased fluid intake was not recognised. One patient, who attended a psychiatric day hospital and lived in a group home, was not found to have polydipsia even retrospectively.

Serum ADH levels are not helpful in these acute situations since the samples require specialist handling and techniques, leading to a delay in the return of the result, and also, any particular individual's reference range will not be known.

We recommend the determination of a serum sodium level in any schizophrenic who is polydipsic, or develops impaired consciousness, unusual lethargy or seizures. The finding of a significantly lowered serum sodium value (less than 120 mmol/l) in the absence of

known adrenal, thyroid, renal or hepatic disease indicates a diagnosis of water intoxication. Indeed this is one of the rare occasions when an estimation of serum sodium is of any clinical use.

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DEXAMETHASONE SUPPRESSION TEST AND DEMENTIA

DEAR SIR,

As Mahendra (*Journal*, January 1984, **144**, 98–99) and Balldin *et al* (*Journal*, September 1983, **143**, 277–81) pointed out it is now reasonably well established that approximately 50 per cent of patients with senile dementia are DST non-suppressors. Mahendra argues that non-suppression reflects the primary pathology of senile dementia and is unrelated to depression.

An alternative explanation for these findings would be the presence of unrecognised depression within senile dementia. Such depression is relatively inaccessible because of the reliance in normal clinical screening for depression on the eliciting of symptoms by direct questioning which is clearly impossible in severe dementia.

We have attempted to address this issue by devising a simple rating scale for signs of depression in the presence of severe senile dementia (Katona, 1983). In a small series of patients rated blind to DST results a

significant relationship was found between depression on our rating scale and DST non-suppression. There was no relationship between DST status and severity of dementia. The possibility that DST non-suppression in dementia reflects coexistent depression is further supported by our finding that in a few cases treatment with tricyclic antidepressants led to DST normalisation though not to clinical improvement.

Thus we suggest that the possibility remains that DST non-suppression may be related to depression even in the presence of senile dementia.

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KATONA, C. L. E. (1983) The DST in schizo-affective illness and dementia. Abstracts of the 7th World Congress of Psychiatry, p.274.

CORRECTION

DEAR SIR,

The authors of the letter on "Suggestion and Suicide by Plastic Bag" (*Journal*, January 1984, **144**, 100–101) must apologise for a mistake in the numbers referring to two months segments. The sequence should have read:

$$0^2 1 0^6 1^3 0^{29} 1^3 0^{11} 1 0 1 0^2$$

This sequence leaves the number of runs and the lag 1 correlation unchanged.

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