

AUTHORS' REPLY: In response to the letter from Dr Goldman, we should point out that our study demonstrated heterogeneity among polydipsic chronic psychiatric patients for the presence and subtype of SIADH. Of the twelve patients, three demonstrated no abnormality, seven demonstrated Type I SIADH and two demonstrated Type II SIADH. We explicitly stated that the differences between the findings of Goldman *et al* (1988) and our own might have resulted from a number of differences in experimental design, or from patient heterogeneity.

We believe that our assessment of the relationship between plasma AVP and serum osmolality is valid because the control group was assessed with the same assay under similar conditions. The control subjects were sitting where the blood was taken and the period of half an hour of sitting was chosen purposely to accommodate the fact that plasma AVP reaches a basal level by this time. There is no reason to suspect that normals studied in a similar 'naturalistic' design would not continue to exhibit a linear correlation between plasma vasopressin and plasma osmolality. Your correspondent notes that Allon *et al* (1990) have investigated the effects of smoking on renal concentrating ability, but the relevance of this study to Goldman's critique is doubtful as, in the Allon study, no measures of vasopressin were made. Our article reviewed the literature on the effects of smoking on vasopressin levels and we are not persuaded that smoking was the cause of the inappropriately high vasopressin levels in our patients.

Regarding the assessment of renal concentrating ability, we think that the similarity of the normal ranges of plasma AVP versus plasma osmolality in the two studies, both of which used radio-immunoassays for the measurement of AVP, justifies the use of the normal range of plasma AVP versus urine osmolality provided by Goldman *et al*. We agree that the pooling of urine over four-hour periods does somewhat reduce the precision of the estimates of urine osmolality, but the main subject of our investigation was vasopressin secretion rather than urine concentrating ability and our findings regarding the latter are consistent with decreased renal concentrating ability seen in normal subjects on prolonged high fluid intake. As we have mentioned, bladder dysfunction is common in these patients, and as a result an ideal method for the study of urine concentrating ability would have to employ bladder catheterisation. Unless this is done, any data concerning renal function must be interpreted with caution.

Emsley *et al* (1989) found that untreated psychotic patients without polydipsia dilute their urine less efficiently than normals after fluid loading; some patients had higher than normal baseline levels of

vasopressin, and these patients showed the most pronounced antidiuretic states. The fact that non-polydipsic, recently admitted, untreated psychotic patients have these abnormalities is not surprising. Whether chronically polydipsic psychotic patients have an abnormality in urinary diluting capacity independent of abnormally high plasma levels of AVP remains moot.

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Psychotic depression presenting as status epilepticus

STR: Griffiths & Farmer (*Journal*, December 1990, 157, 909–911) reported a case of status epilepticus secondary to water intoxication, which in turn was secondary to a depressive psychosis. The patient admitted brief episodes of low mood over the previous ten years associated with an increase in fluid intake.

We were very interested to read this report since, as the authors state, there is a paucity of literature on water intoxication in subjects other than chronic schizophrenic patients. However, another perspective can be provided by a recent paper (Allon *et al*, 1990) reporting investigations of two schizophrenic patients admitted with hyponatremic seizures, and suggesting that cigarette use may contribute to the development of hyponatremia by impairing water excretion.

In their paper, Griffith & Farmer did not mention whether the patient was a smoker, and reported that renal response to water loading was not assessed. It would be interesting to know whether the patient was a smoker, and if that was the case, if her consumption was greater during the depressive episodes. The higher prevalence of heavy smoking in chronic schizophrenic patients than in ambulatory depressive patients could perhaps explain the fact that water intoxication occurs predominantly in the former category.

The common point between schizophrenics and depressives, concerning tobacco, is perhaps the fact