

the next two hours he became increasingly confused and ataxic, and was incontinent of large volumes of dilute urine. Laboratory investigations were normal except for serum sodium which was markedly low at 121. Overnight he passed approximately eight litres of dilute urine (S.G. 1.001), and by 0800 the following morning was alert and symptom-free, with a temperature of 37°C and serum sodium of 136.

Close observation over the next two weeks revealed that he typically consumed 9–12 litres of water daily, and dropped his sodium from a morning value of 136 to a mid-afternoon value of 126–128, accompanied by recurrent, but less severe, symptoms of hypothermia. Regardless of ambient temperature, he wore several sweaters and jackets and spent much of the afternoon sitting beside, or on, the hot water radiators which supplied heat to the building. Interviews with nursing staff who knew the patient well revealed that this was his 'typical' behaviour pattern, which had been present for many years. With fluid restriction to 3–4 litres a day this pattern disappeared, and his afternoon sodium values returned to normal.

Seven additional patients with a similar pattern of afternoon radiator-sitting syndrome were identified in a single afternoon by a visual survey of five chronic psychiatric wards involving 210 patients. On further investigation, all seven showed polydipsia and recurrent afternoon hyponatraemia (sodium levels of 124–132). In each case, fluid restriction abolished the afternoon hyponatraemia and radiator-sitting behaviour. Four patients had no previous known history of hyponatraemia or polydipsia. One later developed hyponatraemic seizures. Three had previous episodes of acute water intoxication with hyponatraemia and seizures. Chart reviews of these three revealed numerous descriptions of what appeared to be, in retrospect, afternoon hypothermia, dating as far back as 14 years prior to the onset of seizures and formal diagnosis of water intoxication.

The recurrent afternoon hypothermia and hyponatraemia associated with polydipsia in these patients may be related to volume overload with tapwater at room temperature, faster than it can be heated or cleared. Alternatively, the altered temperature regulation, increased thirst, impaired water homeostasis and circadian rhythmicity may all be secondary to increased hypothalamic dopamine activity and may represent a tardive hypothalamic syndrome.

Self-induced water intoxication typically goes unrecognised until the development of episodes of acute intoxication with severe neurological symptoms which may be life-threatening (Ferrier, 1985). Additionally, it may be related to tardive changes in hypothalamic dopamine function (Jones, 1984). Early diagnosis is therefore crucial. Screening for afternoon radiator-sitting syndrome appears to be a

rapid, inexpensive, sensitive, and, thus far, specific way of detecting patients at risk for this disorder.

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JONES, B. D. (1984) Psychosis associated with water intoxication: psychogenic polydipsia or concomitant dopaminergic supersensitivity disorder? *The Lancet*, **2**, 519–520.

#### A Search for Sub-Clinical Arteriosclerotic Dementia

SIR: McDonald (1983) searched clinical records of 1432 psychogeriatric admissions for dementia plus one or more strokes or dementia plus epilepsy and found only 17 patients who might meet the criteria for the diagnosis of arteriosclerotic dementia, a subclass of multi-infarct dementia.

Warlow (1980) points out that the deterioration in cognitive ability in arteriosclerotic dementia presumed to be caused by a succession of minor vascular catastrophes tends to be "stepwise" but that not all the episodes are "necessarily obvious". That is to say, to account for cerebral-vascular pathology which would not have been predicted from the clinical history, a sub-clinical course of arteriosclerotic dementia must be postulated. We report a clinical search for minor cerebro-vascular episodes which do not amount to strokes in a female chronic psychogeriatric population in a mental hospital.

On a census day, all the psychogeriatric patients in Warlingham Park Hospital (from a total of 227) who had had more than five "turns" of any kind were identified. "Turns" included transient ischaemic attacks, Alvarez' Little Fits, drop attacks, faints, collapses, and tonic or clonic attacks. The patients thus identified were examined for the presence of severe dementia using the Kew Cognitive Map (McDonald, 1969).

Six months later, from the same population, a second group of patients was identified as being on any drug used in cardiovascular disease; this population was presumed to include those patients with diagnosed (and treated) hypertension. Again,

the population was examined for the presence of dementia.

The first search revealed 15 patients, none of whom were found to be demented following a step-wise history as judged from a review of the history of the present illness in the case notes. That is to say, no sub-clinical phenomena or pseudo-stroke phenomena were occurring which could have led to a diagnosis of arteriosclerotic dementia being made in any of these cases.

The second search found 26 patients, of whom 7 had a pre-existing psychiatric or neuro-psychiatric condition dating from middle age or earlier (i.e. antedating arteriosclerotic dementia), for example depression, schizophrenia, Korsakoff's psychosis and head injury. Six of the patients in this group were demented, and had presented with an episodic step-wise history.

The high discordance between the pathological findings and the ante-mortem diagnosis of 'arteriosclerotic dementia' is well known. This study has searched for a clinical way of bridging this gap, but

has failed to find that in the concept of sub-clinical strokes.

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#### CORRIGENDUM

*Journal*, May 1987, **150**, 662-673 (R. E. Kendell *et al*). The first line of the summary should read "Computer linkage of an obstetric register and a psychiatric case register made it possible to investigate the temporal relationship between childbirth and psychiatric contact in a population of 470 000 people over a 12-year period: 54 087 births resulted in 120 psychiatric admissions within 90 days of parturition.

### A HUNDRED YEARS AGO

#### Mental disorder caused by jaborandi

Dr Wauzh of Liège, who has great belief in the efficacy of jaborandi as a stimulant of the mammary functions, mentions a case which has recently occurred in his practice, showing that inconveniences may occasionally arise from the administration of this drug. He prescribed ten drops of the fluid extract every four hours for a patient whose milk had ceased for a fortnight, with satisfactory results, the secretion being re-established. After a time, however, the patient began to suffer from extreme nervous excitement, accompanied by a fixed idea that she should

murder all her family with a hatchet. On the jaborandi being stopped these alarming symptoms disappeared, and together with them the activity of the mammary glands.

(Jaborandi: The dried leaflets of a Brazilian plant *Pilocarpus pinnatifolus*. *N.O. Rutaceae*, having diuretic and sudorific properties - *OED*)

#### Reference

- The Lancet*, 24 December 1887, 1286.

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