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Editor: Greg Wilkinson

Dementia in 2001

SIR: In his review of the various studies of the prevalence of dementia in the elderly (*Journal*, February 1987, **150**, 193–200) Ineichen mentioned the effect of sample size on the results, but did not sufficiently emphasise its importance. The prevalence of a disorder in a sample is only an estimate of the prevalence in the target population, and the reliability of that estimate depends on the size of the sample. The most extreme findings (large and small) tend to be found in those surveys with the smallest samples, as is shown by the studies of severe dementia in those aged 65 and over quoted by Ineichen, where the sample size is inversely correlated with the deviation of the sample prevalences from the mean ($r = -0.78$; $P < 0.01$). The effect of sample size can be quantified by calculating the standard error or confidence interval of the finding, and where the sample is small these will be large in proportion to the estimated prevalence (Clarke *et al*, 1986).

This is particularly true for the very old, where influential prevalence figures for dementia have been derived from small sub-groups of the elderly within samples of those aged 65 and over. In view of the predicted expansion of this particular age group and the implications of this for medical and social services, it is surprising that our working estimates of the prevalence of dementia are still so vague. Ineichen's rule of thumb (1% of 65–74s and 10% of over 75s) may be correct, but in the present state of epidemiological knowledge it remains something of a guess.

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Khat Psychosis

SIR: I echo the call by Critchlow & Seifert (*Journal*, February 1987, **150**, 247–249) for greater awareness of khat consumption in the UK and its psychotropic effects.

Case Report: A 22-year-old Ethiopian male was brought to Accident and Emergency by his brother, with a one-year history of progressively odd behaviour. He had left college and had stopped claiming DHSS benefit. He had drawn strange patterns on the walls of his flat. On direct questioning he denied illicit drug use. On admission he was unkempt, restless, emotionally labile, and experiencing third person auditory hallucinations. He was normotensive with a heart rate of 85 per minute and small pupils. Urine drug screen was negative. He was treated with chlorpromazine (200 mg t.d.s.), and his positive symptoms disappeared after 72 hours. He remained lethargic and withdrawn. Four days later he again became restless, hallucinated, and was unable to sleep. He settled after 48 hours of continued medication. He later stated that prior to his exacerbation he had chewed khat leaves. He had been a habitual chewer from 10 years of age, and prior to admission he had chewed twice weekly.

The level of sympathetic arousal may be helpful in distinguishing the rare cases of khat intoxication producing manic-like psychosis (as described by Giannini & Costellani (1982)), from khat-induced exacerbation of psychosis. Halbach (1972) comments on the rarity of khat-induced psychosis in areas where chewing is endemic and suggests that most reports of associations are of exacerbation of psychosis in predisposed individuals. This may be explained by the bulky nature of the preparation only permitting low plasma levels of the amphetamine-like agent to be attained by chewing.

Khat leaves are chewed fresh for the best effect. The patient informed us that leaves were flown in twice weekly from Ethiopia and sold at a retail outlet in East London. A packet wrapped in banana leaves costs £5 and provides enough for an evening. There are no legal restrictions on the sale or use of this substance in the UK. The regular importation suggests there must be considerable demand for this substance in London. As yet there is no evidence that use of this substance has spread beyond the East African immigrant population. Khat use should be enquired after in patients from this region presenting with psychotic illness.

I would like to thank Dr H. F. Oakeley for his advice and permission to discuss his patient.

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Electroconvulsive Therapy in the Elderly

SIR: O'Shea *et al* (*Journal*, February 1987, **150**, 255–257) present the case of a 91-year-old patient who responded well to ECT. The oldest documented patient to receive ECT was a 94-year-old woman (Bernstein, 1972). We describe the successful use of ECT in a woman aged 103 years.

Case Report: The patient, who was born on 6 December 1883, was referred to us by her GP with a history of worsening depression over the preceding weeks. On admission she appeared very depressed and expressed the idea that God no longer wanted her. She felt that she was evil and that she belonged to the devil. She also said that she felt "dirty and rotten" inside. She was preoccupied with religious ideas and spoke of little else. Her family reported that her interest in outside events had diminished prior to admission and her appetite had deteriorated. She was diagnosed as suffering from a psychotic depression.

She told us that her first episode of depression had been 40 years previously, when she lived in England. This had recurred from time to time over the years and her first admission to this hospital was in 1977. That episode was similar in its presentation to the current one. At that time she was treated with ECT but relapsed soon after. Altogether, in 1977 she received three courses of ECT, each of approximately four treatments. There was no definite family history of affective illness. Physical examination during this recent admission revealed that she was suffering from mild congestive cardiac failure and atrial fibrillation. She was receiving digoxin and frusemide for this. She was treated initially with a course of mianserin and later of doxepin. These produced no change, and after eight weeks of in-patient care she was still depressed and miserable. We discussed ECT with her and her family and she agreed to receive a course. The anaesthetist had some reservations, but in view of her persistent depression and previous response to ECT he agreed that it was an acceptable risk to give her a general anaesthetic. She received two treatments in all and was remarkably improved after the second. She was somewhat confused after the treatment, but this disappeared within 24 hours. As she was by now well, it was decided not to proceed to a full course of ECT. It is now two months since the patient's discharge and she remains well.

We think that this report demonstrates the effectiveness of ECT as a treatment for psychotic depression even in the very elderly age-group. We agree with Weiner (1982) that ECT is a relatively safe treatment in the elderly if performed with due precautions.

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Delusional Parasitosis

SIR: Macaskill's report (*Journal*, February 1987, **150**, 261–263) of a patient's delusional infestation which responded to non-pharmacological treatment was optimistic, but probably describes a mild form of disorder – as might be expected when clear precipitants are present. However, the potential dangerousness of these patients must be emphasised.

Case report: After the death of his wife and 22 years of police service in Antigua this 70-year-old man emigrated to England, where he has lived alone and worked as a security officer for 18 years (until his retirement in 1982). His complaints about insects started in 1980 when he was rehoused in council property following compulsory purchase of his flat: since then his life has been dominated by delusions of infestation. He has persuaded the council to rehouse him three times, despite having set one flat on fire and been convicted of criminal damage for flooding another. He has also persuaded Environmental Health officers to fumigate his property eight times, although they have never seen any insects in his flats. He was detained under Section 3 of the Mental Health Act in 1983, following a fire, but he was discharged by a tribunal.

In November 1986 he was readmitted under Section 136 following two fires. Mental state on admission revealed a dishevelled, smoke-stained, angry man who shouted loudly and aggressively about his detention and complained that "insects swarm all over me". He was cognitively intact and had a normal computerised tomography scan. During the month of observation while detained under Section 2 this mental state persisted. A Section 3 order was made, and treatment with haloperidol syrup (Andrews *et al*, 1986), up to 30 mg/day, was started. There was a general improvement: he was able to conduct a normal conversation and he became calmer and even friendly. However, his delusions of infestation have persisted and he continues to buy large quantities of fly sprays. He has recently been treated with fluphenazine decanoate as a long-term treatment and because compliance was doubtful at times.