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Correspondence

Contents: Lithium neurotoxicity at subtherapeutic serum levels/Antidepressant effects of ECT/Thalamofrontal psychosis/Parental bonding/Neural network model of amnesia/Suicide prevention/Seasonal affective disorder/Late-onset schizophrenia versus late paraphrenia/Benzodiazepine fatal poisonings/Attachment theory/Variations on the theme of euthanasia/DIDMOAD (Wolfram) syndrome/Cognitive impairment and clozapine/Lithium dosage and inositol levels.

Lithium neurotoxicity at subtherapeutic serum levels

SIR: I read with interest the report by Bell *et al* (*BJP*, May 1993, **162,** 689–692) reporting four cases of lithium neurotoxicity at normal therapeutic levels. I would like to report a case in which a reversible neurotoxic syndrome was associated with the administration of lithium carbonate, at *subtherapeutic* levels, and concurrent neuroleptic medication.

Case report. The patient, a 38-year-old man with idiopathic epilepsy (controlled on carbamazepine) and a chronic psychotic disorder, had proved unresponsive to conventional neuroleptic medication. On the basis of a previously satisfactory response to lithium, he was commenced on lithium carbonate (Priadel, 800 mg daily) in addition to oral (haloperidol and chlorpromazine) and depot (fluphenazine) neuroleptics which had previously been tolerated well with only mild Parkinsonian side-effects. Eighteen days later the patient had a generalised seizure and over the following days exhibited increasingly prominent ataxia and myoclonus in all limbs. Various investigations performed at this time including a cranial computerised tomographic scan were within normal limits apart from an elevated serum alkaline phosphatase (184 IU/l). A serum lithium level (12 hours post-dose) 12 days following commencement of lithium had been 0.55 mmol/l. Lithium was subsequently discontinued and the patient's neurological status reverted to normal.

Three months later lithium carbonate was prescribed again, this time at a dose of 400 mg daily. Four days later a similar pattern of neurological abnormalities were observed whereupon further doses of lithium carbonate were withheld. A serum lithium level 10 hours following the last dose of lithium carbonate was 0.18 mmol/l. Within 72 hours the neurological disturbance had settled completely.

The patient was rechallenged with lithium carbonate on a third occasion a month later at a dose of 400 mg daily. Three days later ataxia and myoclonus were again observed with a serum lithium level (11 hours post-dose) of 0.25 mmol/l. Five days later these abnormalities had again disappeared.

Debate persists concerning the hazards of neurotoxic sequelae in patients receiving concurrent treatment with lithium and neuroleptics; evidence from systematic studies (Baastrup *et al*, 1976; Goldney & Spence, 1984) having failed to confirm any such interactions. This case, despite the presence of some atypical features, suggests that in some circumstances serious neurotoxic sequelae may accompany lithium therapy, even where serum levels are below the usual therapeutic range.

BAASTRUP, P. C., HOLLNAGEL, P., SORENSEN, R., *et al* (1976) Adverse reactions in treatment with lithium carbonate and haloperidol. *JAMA*, **236,** 2645–2646.

GOLDNEY, R. D. & SPENCE, N. D. (1986) Safety of the combination of lithium and neuroleptic drugs. *American Journal of Psychiatry*, **143,** 882–884.

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Antidepressant effects of ECT

SIR: In their thoughtful review on the onset and rate of antidepressant effects of electroconvulsive therapy (ECT), Drs Scott & Whalley (*BJP*, June 1993, **162,** 725–732) point to several major lacunae in the current knowledge. We wish to supplement the following on the subject.

On the question of ECT in drug-naïve, depressed patients, it has been shown that, at least in endogenous depressive patients, the antidepressant effect of ECT is faster than that of imipramine (Gangadhar *et al*, *BJP*, September 1982, **141,** 267–371). Delayed onset of antidepressant effect of ECT is uncertain. A lag in the onset of therapeutic effect is indicated by the study of Jagadeesh *et al* (1992). They showed that in drug-naïve, endogenous depressive patients, a single, bilateral, sinewave ECT produced time-dependent therapeutic effects by two weeks when the magnitude of this effect was comparable to that produced by the conventional alternate-day ECTs.