controls, depressed or lithium-treated patients ($r = 0.24$, -0.19 and -0.26 respectively). The mean (± SEM) of the plasma levels of IgM in the unipolar patients (108 ± 7.5) was significantly ($P<0.02$) lower than the controls. The mean (± SEM of the plasma levels of IgM in the bipolar patients was 142 ± 24.5. It is of interest, therefore, that the abnormality appears to be associated with the unipolar rather than the bipolar form of the illness. However, no definite conclusion can be drawn because of the small number of bipolar patients studied.

The results presented here indicate that depressive patients and lithium-treated patients have lowered plasma IgM concentrations: IgA and IgG concentrations appear to be relatively normal and confirm the results of DeLisi *et al.*

It is worthwhile to note that the pattern of abnormality is present in the euthymic lithium-treated patients, which suggests that we are dealing with a trait associated with vulnerability to affective disorder, particularly unipolar illness.

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References

HAMILTON, M. (1967) Development of a rating scale for primary depressive illness. *British Journal of Social and Clinical Psychology*, **6**, 278–296.

SPITZER, R. L., ENDICOTT, J. & ROBINS, E. (1978) Research diagnostic criteria. Rationale and reliability. *Archives of General Psychiatry*, **35**, 773–782.

Lithium Potentiation of Imipramine in Treatment Resistant Depression

DEAR SIR,

There have been a number of recent reports about the rapid improvement in treatment resistant depression brought about by the addition of lithium carbonate to an antidepressant drug treatment to which the patient has not initially responded (DeMontigny *et al*, 1981; Nelson & Byck, 1982; Price *et al*, 1983; DeMontigny *et al*, 1983; Heninger *et al*, 1983; Louie & Meltzer, 1984). As this regimen may prove to be useful in some treatment refractory depressed patients we wish to report the first 3 such patients in whom we used lithium potentiation. All 3 patients showed a dramatic, sustained improvement.

Patient 1 was a 52-year old divorced salesman who had a 30 year history of bipolar disorder. He had had 6 admissions. There was no family history of psychiatric disorder. He was admitted with a major depressive episode of 7 weeks duration. His Hamilton depression score was 23 and he was a DST non-suppressor. He was treated with imipramine up to 350 mg a day for 6 weeks without improvement. The imipramine was reduced to 300 mg a day and lithium carbonate 300 mg t.d.s. was added. After 6 days he began to improve and during the next 2 weeks he made a complete recovery. Follow-up two months later revealed that he had remained well and had found a job.

Patient 2 was a 32-year old married woman with a 7 year history of bipolar disorder. She had had 3 admissions. There was no family history of psychiatric disorder. She was admitted with a major depressive episode with psychotic features of 19 months duration. Her Hamilton depression score was 35 and she was a suppressor on the DST. She had earlier had a brief partial remission following a course of 12 ECTs. She had subsequently failed to respond to trials of several tricyclic antidepressants in adequate dosage both alone and in combination with MAOI's and stelazine 30 mg a day. During all this time she remained on lithium carbonate 1,500 mg a day.

Because of the acute suicidal risk she was on 'eye contact' for several weeks. She received a second course of 16 bilateral ECTs which led to a 40% improvement. As she still had depressive hallucinations she was started on Melleril 100 mg four times a day along with imipramine 100 mg four times a day. A month later she was no better. We added lithium carbonate 300 mg t.d.s. with dramatic effect as after 3 days she was significantly improved and over the next 10 days made a 95% improvement. She left hospital on these medications and follow-up 2 months later revealed that she had returned to work.

Patient 3 was a 26-year old single male newspaper reporter. He had a 7 year history of bipolar-II disorder and had had 2 admissions. His father had received ECT for depression. He was admitted with a 5 month history of a major depressive episode with melancholia which had not responded to two courses of 6 ECTs nor to adequate trials of tricyclic and MAOI antidepressants in addition to lithium carbonate 1,500 mg a day. He had a Hamilton depression score of 17 and was a supressor on the DST.

He was started on imipramine which over 6 weeks was increased to 400 mg daily. He showed no improvement but when lithium carbonate 300 mg t.d.s. was added there was a dramatic effect and within 4 days he was 80% better and over the next week made a complete recovery. He was discharged on these medications though the imipramine was reduced to 300 mg daily. A two month follow-up revealed that he had remained well and had obtained another newspaper reporter job.

All 3 patients were admitted to our research ward after their previous medications had been slowly withdrawn either in their own hospital or as an outpatient. Two were referred as they were treatment refractory. On our ward they were medication-free for at least four weeks while they were investigated. During this time they remained depressed and all 3 were also subsequently refractory to at least one

month's treatment with imipramine which was increased till at least a minimum daily dose of 350 mg. All 3 patients showed a dramatic improvement which began within 3 to 6 days of the addition of lithium carbonate 300 mg t.d.s. Thus it is unlikely that the apparent antidepressant effect of the addition of lithium was merely a spontaneous remission or a late response to the imipramine. In all 3 patients the improvement was sustained, the patients were discharged and follow-up revealed that they were well and had obtained employment.

All 3 patients had a different type of recurrent affective disorder—1 unipolar, 1 bipolar, and 1 bipolar-II. All 3 had depressive episodes of different severity (Hamilton scores ranged from 17 to 35). One was a DST non-suppressor and 2 suppressed normally. One had a family history of affective disorder but 2 did not. Future research will attempt to identify clinical and biochemical features of the subgroup of treatment refractory depressed patients who may respond to lithium potentiation.

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References

DEMONTIGNY, C., COWINOYER, G., MORISSETTE, R., LANGLOIS, R. & CAILLE, G. (1983) Lithium carbonate addition in tricyclic antidepressant-resistant unipolar depression: correlations with the neurobiologic actions of tricyclic antidepressant drugs and lithium ion on the serotonin system. *Archives of General Psychiatry*, **40**, 1327–1334.

——, GRUNBERG, F., MAYER, A. & DESCHENES, J.-P. (1981) Lithium induced rapid relief of depression in tricyclic antidepressant drug non-responders. *British Journal of Psychiatry*, **138**, 252–256.

HENINGER, G. R., CHARNEY, D. S. & STERNBERG, D. E. (1983) Lithium carbonate augmentation of antidepressant treatment: an effective prescription for treatment-refractory depression. *Archives of General Psychiatry*, **40**, 1335–1342.

LOUIE, A. & MELTZER, M. (1984) Lithium potentiation of antidepressant treatment. *Journal of Clinical Psychopharmacology*, **4**, 316–321.

NELSON, J. C. & BYCK, R. (1982) Rapid response to lithium in phenelzine non-responders. *British Journal of Psychiatry*, **141**, 85–86.

PRICE, L. H., CONWELL, Y. & NELSON, J. C. (1983) Lithium augmentation of combined neuroleptic-tricyclic treatment in delusional depression. *American Journal of Psychiatry*, **140**, 318–322.

Huntington's Chorea without Dementia

DEAR SIR,

Following the recent account of a 54-year old man with probable Huntington's chorea presenting without evidence of dementia (Turner, *Journal*, May 1985, **146**, 548–550), we should like to draw your readers' attention to a similar case which came to post mortem.

The patient was a 68-year old man who first presented at his local health centre in a condition felt to reflect marked deterioration in his physical and mental state. He was referred to MOPD where choreiform movements of his hands and head were noted. Although his mental state was considered odd by the physician, he described him as being "well-preserved" mentally, though he felt that the man might have Huntington's chorea. A further referral for neurological opinion added little—he was found to have symmetrical choreiform movements, but otherwise no abnormal signs, was "probably not demented" and was considered to have insight into his deteriorated state.

A further review appointment at MOPD found him well oriented in time and place but very unkempt. Two months later he appeared at the health centre saying he could not cope and that he would throw himself out of the window if forced to go home. He was admitted to this hospital for psychiatric assessment, where he stayed until his death some sixteen months later. During this time the details of his past history emerged.

Born in a small village in Eastern Poland, his family had mostly perished in the concentration camps during the 2nd World War. Escaping from a POW camp, he came to Scotland in 1942, married a Scottish woman, but had separated from her some 25 years previously. For over twenty years he had had very little to do with either wife or children though the family continued living in the same area. As a result of living like a recluse it was difficult to document the history of the choreiform movements and self neglect, though both had been present for some years before he had been referred to MOPD.

On admission to the hospital he appeared intellectually "reasonably" preserved and was fairly well oriented. Psychometric testing was carried out during the first month of his stay. He scored 21 on the Coloured Progressive Matrices (IQ 95), and 42 on the Wechsler Memory Scale (MQ 92), both within the limits of a normal performance for a man of his age. On the CAPE cognitive and behavioural assessment scales he obtained 'B' grades, indicating mild impairment and low level of dependency. He was continent, able to dress, wash and feed himself. Six weeks after his first assessment he was given a repeat psychometric examination. His scores on the CPM rose to 24 and his WMS score to 46 (still within the normal range). Almost one year after his admission he was interviewed after a request to have his