serotonergic neurotransmission, it is likely that lithium acts by a different mechanism.

Secondly, many studies find that lithium can potentiate the antidepressant effect of tricyclics within three or four days (de Montigny *et al*, 1981, 1983; Chiu & Rimon, 1987). Compared with the slow onset of antidepressant action of tricyclics alone, the rapid potentiating action of lithium is not typical of changes in neurotransmission but is more consistent with changes in enzymatic reactions.

It should be emphasised that decreased Na^+/K^+-ATPase activity as a mechanism of therapy-resistant depression is only a tentative hypothesis that remains to be tested. Yet researches along that line are certainly worthwhile, especially if studies on neurotransmission do not yield further breakthroughs

LEO P. W. CHIU

Department of Psychiatry
Chinese University of Hong Kong
Prince of Wales Hospital
Shatin NT
Hong Kong

References

CHIU, L. P. W. & RIMON, R. (1987) Response to clomipramine after short course of lithium in treatment-resistant depression: does lithium have a 'priming' effect? *Human Psychopharmacology*, **2**, 191–193.

CHIU, L. P. W. & RIMON, R. (1988) Vanadium in psychiatry. *Human Psychopharmacology*, **3**, (in press).

LICHTSTEIN, D., MINC, D., BOURRIT, A., DEUTSCH, J., KARLISH, S. J. D., BELMAKER, H., RIMON, R. & PALO, J. (1985) Evidence for the presence of 'ouabain-like' compound in human cerebrospinal fluid. *Brain Research*, **325**, 13–19.

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

——, COURNOYER, G., MORISETTE, R., LANGLOIS, R. & CAILLE, G. (1983) Lithium carbonate addition in tricyclic antidepressant-resistant unipolar depression. *Archives of General Psychiatry*, **40**, 1327–1334.

SIR: There were two purposes to my Annotation (*Journal*, April 1988, **152**, 453–459). The first was to emphasise the need to establish a definition of resistant depression that would be internationally recognised. The second was to speculate on the possible biochemical aetiology of resistant depression, with particular reference to changes in neurotransmitter function. As lithium has been advocated as a combination therapy with tricyclic antidepressants in the treatment of therapy resistance, I commented on the possible causes of such a beneficial interaction. It was not my intention to suggest that only the serotonergic system was involved, or that it was causally related to the condition or to the patients response to treatment. The involvement of serotonin has achieved prominence because its transport, receptor function, etc. can be measured in blood. Despite the assertion of Dr Chiu, there is reason to believe that the synergistic interaction between lithium and tricyclic antidepressants is associated with rapid receptor adaptation, as I indicated in my article. Undoubtedly such changes are associated with, or caused by, other changes in electrolyte flux as well as those in neurotransmitters whose activity in patients still awaits evaluation.

Regarding Dr Worrall's comments, the consensus concerning the efficacy of lithium in the treatment of endogenous depression is that the drug is not as effective as tricyclic antidepressants (e.g. Lader & Herrington, 1981). I agree with Dr Worrall that the reason for the greater efficacy of lithium in treating the depressive component of bipolar rather than unipolar patients is unclear and, in my opinion, will remain so until adequately controlled trials are undertaken in which neurotransmitter function, as well as clinical response, is assessed. Dr Worrall's proposal that there are two distinct groups of depressed patients that differ in the nature of their defect is appealing but, to my knowledge, remains to be proven.

While there may be differences of opinion over emphasis, I'm sure all readers will agree that only more research will provide the answers. If my Annotation has achieved nothing but this then it has achieved its purpose.

B. E. LEONARD

Department of Pharmacology
University College Galway
Ireland

Reference

LADER, M. H. & HERRINGTON, R. N. (1981) Lithium. In *Handbook of Psychiatry* (eds H. M. van Praag, M. H. Lader, O. J. Rafaelsen & E. J. Sachar), pp. 61–72. New York: Marcel Dekker.

Prescribing for the Long-Term Mentally Ill

SIR: Holloway (*Journal*, April 1988, **152**, 511–514) refers to the paper by Priern *et al* (1978) who point out that, for the purpose of assessing the appropriateness of drug prescribing, cross-sectional data is unsatisfactory and misleading and intimate knowledge of the patients' clinical details and treatment history are essential. Dr Holloway then proceeds to criticise the appropriateness of prescribing on the basis of cross-sectional assessment of mental state supplemented by history of illness and treatment from patients' recollections, with or without case notes. He emphasises that case notes were a "poor

source of data on past treatments and reasons why treatments had been used" and "poor recording of clinical data made it difficult to assess the rationale for, or efficacy of, treatment initiated by other doctors". As it seems unlikely that patients' information regarding their past treatment would be any more reliable, we must conclude that the authors' judgements are based on highly unreliable data. It should be added that if case notes fail to record treatment details, this does not indicate inappropriate treatment but poor record-keeping.

I have recently completed a study of prescribing to lithium clinic attenders, comparing prescriptions in the clinic with those issued to these patients at the time of their last in-patient discharge. This shows a highly significant reduction in polypharmacy, frequency of dosage, and use of neuroleptic and anticholinergic drugs in the clinic, suggesting that in-patient prescribing habits do not inevitably carry over into the clinic setting and mitigating against the notion that clinicians habitually indulge in uninformed, irrational polypharmacy.

I contest the assertion that Muijen & Silverstone (1987) produced evidence that an academic psychopharmacology service produces more rational prescribing. Their three-hospital survey was not controlled, the authors confirming differences between the patient populations and hospitals, and as a result they have only shown that the hospital with the least polypharmacy also had a psychopharmacology department. This no more establishes a causal relationship than the presence of a neurosurgical unit only in this hospital would imply a meaningful association between neurosurgical units and low polypharmacy. Similarly, it cannot be accepted that Diamond *et al* (1976) have shown that peer group review in out-patients induced more rational prescribing, as they too omitted a control group. My own lithium clinic findings show that considerable changes occurred over time without intervention, and these would also be considered more rational.

Dr Holloway's suggestion for agreed criteria of good prescribing practice was undertaken by an APA Task Force (Dorsey *et al*, 1979), and the limitations of this procedure were, perhaps, highlighted by their need to emphasise that these should be subject to adaptation based on "differences in populations, clinical practices, resources, and professional judgement". Furthermore, they acknowledged the appropriateness of a wide range of psychopharmacological practices, including drug combinations, and this eminent group of experts were unable to reach a unanimous opinion on the correct use of anticholinergic drugs for patients receiving neuroleptics.

To date, prescribing surveys have not provided a suitable data base on which to judge the appropriateness of prescribing. If clinicians' practices are to be evaluated, this must be on the basis of reliable and valid information, and although the medication review sheet provides a useful recording tool it does not help to address the fundamental problem of obtaining suitable data.

D. N. ANDERSON

Royal Liverpool Hospital
Prescot Street
Liverpool L7 8XP

References

DIAMOND, H., TISLOW, R., SNYDER, T. & RICKELS, K. (1976) Peer review of prescribing patterns in a CHMC. *American Journal of Psychiatry*, **133**, 697–699.

DORSEY, R., AYD, F. J., COLE, J., KLEIN, D., SIMPSON, G., TUPIN, J. & DIMASCIO, A. (1979) Psychopharmacological Screening Criteria Developmental Project. *Journal of the American Medical Association*, **241**, 1021–1031.

MUIJEN, M. & SILVERSTONE, T. (1987) A comparative hospital survey of psychotropic drug prescribing. *British Journal of Psychiatry*, **150**, 501–504.

PRIERN, L. H., BALTER, M. B. & CAFFEY, M. (1978) Hospital surveys of prescribing with psychotherapeutic drugs. *Archives of General Psychiatry*, **35**, 1271–1275.

Schizophrenic Thought Disorder

SIR: Cutting & Murphy (*Journal*, March 1988, **152**, 310–319) have rightly emphasised the need to investigate the difficult and little-understood area of thought disorder in schizophrenic patients. They have also illustrated an attempt to define and operationalise possible components of thought disorder for study.

The speculative proposal and subsequent conclusion of a component of deficiency in social and practical knowledge of the real world is debatable. The examples quoted of a patient regarding a thermometer as the cause of his 27-year pneumonia and of another patient planning to audition for a star part in a film already made illustrate the use of primitive modes of thinking in wakeful life in schizophrenic patients (Lehmann, 1980). These modes of thinking are closely related to the primary process thinking that is at work in normal dreaming and allow for various psychological mechanisms, including displacement of feelings from one object to another and a disregard for time sequence (Freud, 1976).

Now and then I come across patients telling me stories about themselves which could not have been true nor logical, just as in the examples quoted. In accordance with the technique recommended in conducting an interview with the schizophrenic patient