

withdrawal of lithium with intensive supervision during the period of reduction and discontinuation may be a more adequate approach to preventing relapses.

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LITHIUM THERAPY AND THE RISK FOR LEUKEMIA

DEAR SIR,

There are now several case reports raising the question of a relationship between lithium and leukemia, Orr and McKernan (1979), Hammond and Appelbaum (1980), Nielsen (1980). Levitt and Quesenberry (1980) have shown that lithium *in vivo* increases granulocyte production, and this mechanism might explain the mild leukocytosis noted in many patients on lithium maintenance therapy (Gallagher and Gleaves, 1979).

One hypothesis is that chronic marrow stimulation by lithium may induce leukemia, especially of the myelogenous subtype. In order to examine this question we decided to search for any overlap in the diagnoses of bipolar affective disorder and leukemia among patients in our institution. Over the past 10 years our hospital has treated 710 in-patients with bipolar affective disorder and 571 patients with leukemia. Data obtained from the State Tumor Registry indicates that our hospital treats approximately half of all leukemia patients in Iowa. Our experience is that patients treated in this hospital for a major medical or psychiatric problem usually receive treatment here for other illnesses that develop. Our anticipated incidence of leukemia in the bipolar sample was 1–2 cases (Gallagher and Gleaves, 1979) and we therefore would expect to identify 0–1 case

by our survey. Another assumption was that almost all of the bipolar patients would have been exposed to lithium at one time or another, and many would be on chronic therapy. Support for the hypothesis would come by finding a significantly increased incidence of leukemia in the lithium-treated patients.

We found no cases of leukemia in the group of bipolar patients. This finding speaks against an association of lithium treatment with leukemia. However, a well-designed, prospective study that specifically follows up on each subject would put the hypothesis to its proper test.

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IDENTIFICATION OF DISEASE ENTITIES

DEAR SIR,

We have been surprised at the lack of correspondence relating to Kendell and Brockington's paper on the identification of disease entities (*Journal*, 1980, **137**, 324–31). Apart from one letter which is critical on broadly philosophical issues, there has been little discussion of the statistical basis of the proposed technique, which, since the authors invite its use by others, has considerable importance.

It seems to us that the authors oversimplify by implication the interpretation which would be made had even a clear nonlinearity been observed. The situation is complicated by the fact that the scales used in psychiatric research are seldom natural interval scales analogous to those found in the physical sciences (e.g. weight). The intervals between points on the scales cannot be guaranteed to be of equal size—any given interval can be arbitrarily stretched or squashed, making a nonsense of any assessment of linearity of the resulting plot. Admittedly some of the scales referred to are weighted averages (the discriminant functions) and the averaging process