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ABSTRACTS OF COMMUNICATIONS

INTRACELLULAR LITHIUM

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Intracellular (IC) lithium (Li) levels in erythrocytes and extracellular (EC) levels in plasma were determined in 94 patients treated with lithium carbonate. A wide sample of IC/EC Li ratios from 0.20 to 1.00 with a unimodal distribution was found. Patients with neuroses or character disorders had IC/EC Li ratios significantly lower than patients with schizophrenia or primary affective disorders. The ratios in unipolar depressives were no different from those in bipolar depressives and manics. Overall, females had slightly higher IC/EC Li ratios than males ($P < 0.05$); the only diagnostic subgroup where this difference was observed was schizophrenia. In most patients the IC/EC Li ratio was stable over long time periods (months); some patients showed a progressive increase in their IC/EC Li ratios which did not plateau for 3-6 months. Tricyclic antidepressants and neuroleptic drugs do not affect the IC/EC Li ratio. No change in the ratio was observed over two menstrual cycles in one patient. No change in the IC/EC Li ratio was found between manic and depressed phases in bipolar subjects.

Twenty-five patients were treated for depression with lithium carbonate. Seven of ten bipolar patients improved, compared with six of fifteen unipolar patients. The thirteen patients overall who improved had comparable dosages, plasma Li levels, IC Li levels and IC/EC ratios.

In some patients symptoms of Li neurotoxicity developed with plasma Li levels less than 1 mM; these patients had high IC/EC Li ratios and IC Li levels greater than 0.6 mM. These results indicate that IC

Li levels and the IC/EC Li ratio may be useful in predicting Li neurotoxicity. Another application of the IC/EC Li ratio is in monitoring compliance. Patients who took Li orally irregularly or whose last dose was less than 6 hr before blood sampling had lower ratios than their normal plateau ratio. The IC Li levels and the IC/EC ratios detected this dosage irregularity, which could not be inferred simply from the plasma Li levels.

Our results suggest that IC Li levels and the IC/EC Li ratios provide useful clinical information in the management of Li therapy. They do not, however, confirm other reports that these variables can distinguish bipolar from unipolar subjects, nor that they can predict an antidepressant response to Li.

MAO INHIBITORS AND FOODS— REALITY AND MYTHOLOGY

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The hypertensive 'cheese reaction' in patients on MAO inhibitors is real, but is it possible that because of exaggerated fears about reactions with other foods, MAO inhibitors are being withheld from patients who could benefit?

Reactions are usually due to tyramine (resulting from breakdown of protein food) passing unchanged into the bloodstream through blocked MAO and their severity is related to the total amount consumed; 6 mg can increase blood pressure and 25 mg probably produce severe hypertension. Matured cheeses contain variable but usually very high levels of tyramine (up to 2000 µg/g); dangerous amounts can easily be eaten and the great majority of severe, and virtually all fatal, reactions have involved matured