

therefore revert to its original name of occupational neuralgia of the radial nerve and its branches at the elbow, or to some other name indicative of the pathology of the condition."

There is also a reference to the radial nerve as the site of compression causing tennis elbow symptoms in a paper written by Mr. Norman Capener in 1966,² in which he described constriction of the posterior interosseous nerve by a tumour, and it was noted that Dr. D. H. Tompsett had carried out similar dissections to those of Mr. Yakoub. It was the publication of this paper which made me decide not to do anything further about the publication of my own work at that time.

However, I think I have established in this letter that the idea of a radial tunnel syndrome is not new. The credit for the original description, as so often in medicine and surgery, belongs to the great surgeons of the past, in this case Sir Charles Bell. It is another "Bell's palsy."—I am etc.,

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- ¹ Roles, N. C., and Maudsley, R. H., *Journal of Bone and Joint Surgery*, 1972, 54B, 499.
² Capener, N., *Journal of Bone and Joint Surgery*, 1966, 48B, 770.

Lithium Intoxication

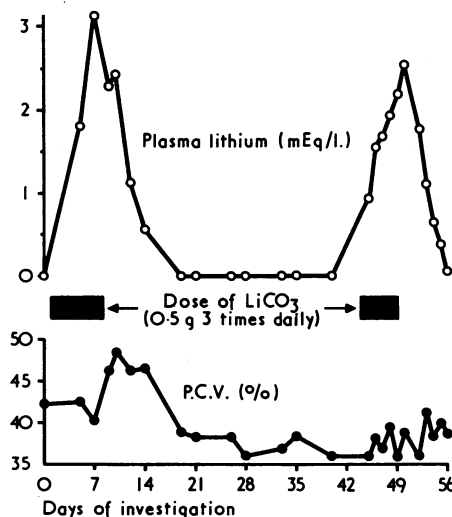
SIR,—I was interested to read the account by Dr. B. von Hartitzsch and others (30 December, p. 757) of neurological phenomena persisting in two of three patients even after reduction of high blood lithium levels with haemodialysis. It is not surprising that the neurological phenomena persisted, for extrapyramidal changes can occur during lithium therapy while the blood levels remain low.

It has been recognized for some time that there is no consistent relationship between the blood lithium level and side and toxic effects. This is presumably because side effects may be associated with a lithium-induced extracellular or intracellular disturbance, or both. When extracellular phenomena develop, usually during the early days of therapy, it is possible that it is the lithium transport system that is responsible owing to its effect upon the cellular membrane, although the blood lithium level remains below 2 mmol/l. This is to be contrasted with the intracellular disturbance, which is usually associated with a major disruption of the electrolyte balance, as manifest by the levels of the electrolytes. In this situation the blood lithium level is above 2 mmol/l.

Taking the upper gastrointestinal tract as an example, the pattern of symptoms can progress along either one of two pathways. Thus it is not unusual for nausea or epigastric fullness to be experienced within three or four days of the commencement of ingestion of lithium, and this sometimes causes the patient to discontinue medication. A blood level taken at this time gives a reading invariably below 1 mmol/l., and the symptoms therefore represent an example of extracellular disturbance. It is not surprising that it occurs, because the lithium ion permeates the body quickly. These gastric symptoms must be contrasted with those associated with the intracellular disturbance, in which the patient is much more likely to be vomiting recurrently. The vomiting tends to persist for several days after the

cessation of lithium treatment and in this situation the blood lithium level will be at least 2 mmol/l. and will rise rapidly.

In the accompanying chart the blood lithium levels of a 75-year-old woman who suffered from severe and recurrent attacks of mania and depression are shown. The first peak, which commenced as soon as lithium



therapy started, was associated with dehydration, as the raised packed cell volume (P.C.V.) shows, and treatment had to be discontinued owing to the appearance of side effects. The second peak, commencing on the 44th day, represents another attempt to give lithium therapy after the dehydration had been dealt with and the P.C.V. had returned to normal. This attempt, however, had to be discontinued on the 49th day because the blood lithium level again began to rise quickly, even before any clinical evidence of side effects had been observed. The chart shows that a reliable and predictable pattern of blood level occurs in some patients so as to allow one to say that in these, at any rate, the high blood lithium levels precede the toxic effects, and if monitored in this way can give an early warning of a developing toxic state.

Contrary to the figures quoted by Dr. Von Hartitzsch and his colleagues, there is no evidence that an optimum level for lithium therapy exists. However, regular assessment of blood lithium levels should be carried out weekly during the first month for the following reasons: (1) it will indicate whether or not the patient is taking the medicine; (2) if untoward effects occur the significance of these can be assessed; (3) if toxic states develop the effect of detoxication therapy can be evaluated more clearly from this original baseline and the likely pathology determined; and (4) regular assessment will indicate when it is thought that lithium equilibrium has been achieved, and it is this state that is thought to be most valuable in the treatment programme. The dosage of lithium should be estimated against the body weight, and if there is any indication of previous renal disease then a lithium loading test is most valuable.

It is to be hoped, however, that the description of these two instances of neurological disorder will not deter doctors from considering lithium therapy in recurrent affective disorders. From its very early days lithium has been recognized as capable, like any other drug, of producing toxic effects.

These risks are well known and their pharmacology has been well described by Schou.¹ They have to be balanced against the risks of suicide and recurring episodes of severe disability. It is, moreover, important to recognize the value of careful selection of patients for treatment, making allowances in the dosage schedule for body weight, dehydration, and renal phenomena. This, together with clinical observation and assessment of electrolyte levels, will do much to reduce the incidence of toxic phenomena.—I am, etc.,

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¹ Schou, M., *Pharmacological Reviews*, 1957, 9, 17.

Cost of Drugs

SIR,—One of the important elements in the high cost of the National Health Service must be the prescribing and dispensing of drugs which are much more expensive than standard preparations but have exactly the same therapeutic effect. Disparities in the price of corticosteroids provide a striking example of the way in which public money is being squandered by doctors who do not take the trouble to find out the cost of the drugs they prescribe.

I know of no evidence that any oral corticosteroid preparation is superior to prednisolone for the treatment of condition such as rheumatoid arthritis and asthma. Prednisolone obtained from the least expensive source costs less than 30p per 100 5-mg tablets (basic N.H.S. price), but most manufacturers charge 42p for the same quantity of their branded product and one firm charges as much as 94p. Equivalent amounts of drugs such as betamethasone (85p), dexamethasone (£2.82), and triamcinolone (£4.70) are even more expensive, and methylprednisolone (£5.14) is the most expensive of all.

The last drug (methylprednisolone) which costs 17 times as much as the least expensive brand of prednisolone, is widely prescribed by general practitioners, although to the best of my knowledge there is no evidence that it is more effective than prednisolone or less liable to cause side effects. Any doctor who prescribes methylprednisolone thus lays himself open to a charge of either ignorance of gullibility, for which the general public has to pay the penalty. Similar examples can no doubt be cited for every other group of drugs, and the total cost to the N.H.S. of such careless prescribing must be enormous.

Members of the medical profession in Britain enjoy the precious right to prescribe any drug, whatever its cost, which they consider to be best for their patients, but they also have an obligation to ensure that this right is not abused.

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Hazardous Wastes

SIR,—All would agree with the importance of the subject discussed in your leading article (30 December, p. 746), but it might be suggested that before preaching to others doctors should first put their own house in order, and this particularly applies to my own specialty, histopathology. Many patho-