Letters to the Editor

SI Units in Pathology: the Next Stage

As a neurologist and occasional reader of your Journal I studied with interest Professor D. N. Baron's signed leader in (J. clin. Path., 26, 729-730). Some of the innovations which he predicts for the second stage of the introduction of SI units in Britain are well known to personnel in the wards and laboratories of the University Hospital of Wales where they have been used continuously since the hospital was opened two years ago.

The changes which include using the mole (mol) as the measure of all chemical substances of known structure are generally welcome although they have sometimes produced diversity in place of uniformity. Chemical analysis, for example, of the cerebrospinal fluid (csf) reports protein in grams per litre (g/l) but glucose and chloride in millimoles per litre (mmol/l) whereas previously all three were expressed uniformly in milligrams per decilitre (mg/dl).

At the risk of seeming conservative and hypercritical of a major advance in scientific communication might I claim for the csf glucose that immunity from standardization which, according to Professor Baron, has been granted to blood haemoglobin in Britain where its concentration will continue to be expressed in grams per decilitre (g/dl)? Since the streptomycin revolution the level of glucose in the csf has proved a sensitive index of the chemical changes in the fluid at the onset, and during the treatment, of tuberculous meningitis. In SI units, however, the critical levels between 30 mg/dl and 50 mg/dl are compressed into the much narrower range between 1-7 mmol/l and 2-8 mmol/l. The clinician has thereby lost a well tried vernier.

 Might the ‘working party of representatives of many relevant laboratory-based organizations’ consider this and other related facets of the revolution which they so laudably contemplate?

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SI Units and Concentration of Glucose in Cerebrospinal Fluid

I am grateful to Dr Wells for his interest and for raising an important point.

The precision of csf glucose analyses under normal laboratory conditions is not better than 2 mg/dl, or 0.11 mmol/l. Therefore expression of csf glucose results to the nearest unit milligram, implying, for example, that 38 mg/dl necessarily represents a truly higher concentration than 37 mg/dl, is invalid; the wise laboratory at best gives glucose results at 2 mg/dl intervals. If the laboratory now gives these results at 0.1 mmol/l intervals nothing has been lost.

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SI Units and Concentration of Glucose in Cerebrospinal Fluid

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