

The different departments of the college and the hospital had, in addition to their normal teaching, various research activities in hand during the year under report.

The Co-operative Credit Society of the labour staff of the hospital and college has been working satisfactorily and has continued to be in class 'A' since its promotion to it.

## Correspondence

### GRADING OF QUININE DOSAGE TO BODY-WEIGHT : POSSIBLE ECONOMY

SIR,—On account of the present urgent need for economy in the use of quinine the question of dosage for malaria is being widely discussed. It will be generally agreed that 'it is wise to calculate the dose per unit of body-weight whenever a powerful drug is given for the purpose of producing a full response' (Clark, 1935). Yet one has seen little reference to dosage of quinine expressed in terms of body-weight. Among large groups of men, such as soldiers who conform to known physical standards, minor variations in body-weight can be ignored and a standard course of treatment used. Among civilians there are much greater variations, but the same dose is often used. In this country, large sections of the population are normally of smaller build than, say, European soldiers. Most of those attending hospitals and dispensaries are under-weight from various reasons. Yet in the rush of work a full dose of the stock mixture or powder *t.d.s.* is often ordered, irrespective of whether the patient weighs 100 pounds, 120 pounds, or 140 pounds. Other circumstances being equal, if the dose is suitable for the latter case, it is obviously wasteful for the former. A saving of 20 per cent or more of the dose could often be made with no loss of therapeutic efficiency. Such a saving multiplied several million times would amount to a considerable total. Incidentally the same applies to most other drugs used in the dispensary.

For the wider application of this method, two things are necessary. Firstly, a personal weighing machine close beside the doctor where he works so that the patient has only to step on to it. Guessing the weight is less satisfactory, but an intelligent guess is better than ignoring the weight altogether. Secondly, the 'milligrammes per kilo' of pharmacologists must be translated into more familiar units. One way is to make the dose contained in one ounce of stock mixture suitable for a patient of 160 pounds and then give the one drachm for every 20 pounds body-weight. Or using the metric system with a full dose of 30 c.cm., 2 c.cm. may be given for every 10 pounds. In this hospital we use as a full dose 2 grains of quinine sulphate or totaquine per stone per day (20 mgm./kilo). The stock mixtures contain 2 grains per drachm, so a 10-stone man would get 10 drachms or 20 grains daily. Most of our adult patients are only between 6 and 8 stone, but formerly they were getting about the same dose. The dosage for babies and children is calculated in the same way. In any particular patient the dose may have to be modified for various reasons. Different scales of dosage may be adopted in different places to suit local conditions. But unless the dosage of quinine is graded according to body-weight it is impossible to assess the effects of variable factors in host and parasite, *e.g.*, individual or racial differences in response to treatment, due to immunity or tolerance on the one hand, and the virulence of local species and strains of parasite on the other. Nor is it possible to compare the results of those working under different conditions in different parts of the world. However our immediate concern is maximum efficiency in the use of the limited stocks of quinine available. It is suggested that a more general use of the method of grading of dose to body-weight would result not only in more accurate and scientific work but also in definite economy.

### REFERENCE

CLARK, A. J. (1935) .. *Applied Pharmacology*. Fifth Edition, p. 12. J. and A. Churchill, London.

E. GORDON WILKINS.

MOORSHEAD MEMORIAL HOSPITAL,  
BAPTIST MISSION,  
G. UDAYAGIRI, GANJAM,  
7th December, 1942.

### DEATH FOLLOWING NEOARSPHENAMINE INJECTION

SIR,—I had a case of death within half an hour of neosalvarsan injection.

A Hindu male, aged 30 years, had asthma for the last six years. He was a compounder by occupation. He was given 3 to 4 neosalvarsan injections before for asthma with temporary relief. His heart had no organic disease, nor was he passing albumin or sugar in his urine. Every time he got an asthmatic attack, it lasted for three to four days. During the attack adrenalin injections used to relieve him but occasionally morphia had to be injected.

His last attack of asthma began on 4th December, 1942, and practically subsided by the 7th, and he asked me whether I would give him one neosalvarsan injection. A similar request was made to me a few months ago, but I had refused. This time I agreed and told him to bring the tube next day. No purgative was advised as his bowels were clear.

On the 8th he brought a 0.6 gramme tube of neosalvarsan. It was an old one but the powder was yellowish; no reddish coloration was present indicating chemical deterioration. I had used several old tubes like this before. The tube was not cracked. There was no paper cover with the tube, hence its date of manufacture was not known. The solution was made with boiled distilled water, and it was clear. He was injected at about 12-30 p.m. There was no untoward symptom during the injection. After the injection he was sitting on the table when he fell back. He was supported by the staff and I was called. I saw him immediately and found the heart failing. Adrenalin 1 in 1,000 was injected followed by strychnine and digitalin as the former had no effect. The patient died at 1 p.m.

I invite your readers to communicate their experiences, if any, of deaths after neosalvarsan injections and your criticism on the fatal accident.

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Medical Officer.

VERAWAL,  
KATHIAWAR,  
10th December, 1942.

[Note.—The patient apparently died of syncope and heart failure. The 'asthma' might have been due to some undetermined cause, and in any case there was no clear indication for neosalvarsan injection in this particular case. The incident, however, would serve as a warning against one being guided by patients to give an injection, and using a drug of doubtful purity.—EDITOR, *I. M. G.*]

### KNOWLEDGE OF SEX

SIR,—I have read with interest Lieut.-Colonel Owen Berkeley-Hill's paper 'A Case of Mild Hypopituitarism' published in the *Indian Medical Gazette* of March 1942, where he has stressed the sociological importance of sexual knowledge for Indians. I quite agree with the author and am surprised to find that a correspondent, writing under the caption 'Knowledge of Sex' appearing in the June 1942 number of the *Indian Medical Gazette*, has taken objection to it. His statement that the author's comments are not based on facts does not hold good, as the author's conclusions are based on the case he has cited. Unfortunately in our country, no work of a tangible