Whooping-cough Immunization

SIR,—It is a little surprising to me that the report of the Public Health Laboratory Service and Working Party (8 November, p. 329) concluded that a vaccine which had provided protection against *B. pertussis* types 1, 2, and types 1, 2, and 3, should have been so relatively unsuccessful in immunizing against types 1, 3. As types 1, 3 appeared to be prevalent during the period from which the P.H.L.S. survey was being made, is it possible that something had taken place to interfere with the effectiveness of the *pertussis* fraction of the prophylactic used? The earlier successful official surveys, and my own, were made when the injections given were probably almost entirely a dual antigen of diphtheria and pertussis. Since then the picture has been complicated by the addition of tetanus toxoid and poliomyelitis, the latter either by injection or by mouth.

This now brings us to the interesting question as to how many diseases or antigens the body is equipped or designed to protect itself simultaneously against without failure of one or another immunity response to multiple stimuli. Some ten years ago, in a paper given at a Wellcome symposium before a most distinguished assembly, I suggested that in the use of multiple prophylactics we must be careful not to overload the local immunity mechanism by injecting too much, or too great a variety in one arm. No one questioned this warning note.

I had some reason for giving this warning. Dr. L. B. Holt and I had been investigating the effects of varying the pertussis and tetanus content in mixtures with diphtheria toxoid.¹ There was some evidence ($P=0.05$) that excess of tetanus toxoid in a diphtheria-tetanus mixture caused a drop in the diphtheria immunity response. Likewise, in a diphtheria-tetanus-pertussis mixture the immunity response to diphtheria was better when the diphtheria-pertussis mixture was given in one arm and the tetanus toxoid in the other. Likewise the adjuvant action of increasing doses of *H. pertussis* in a diphtheria-pertussis mixture was most clearly demonstrated. Admittedly there is only some evidence of tetanus toxoid interference with diphtheria response, but who can say that pertussis immunity cannot be influenced adversely by trying to do too much at a time? Rubella and morbilli have not been mentioned in this discussion, but these might further complicate the picture unless spacing of treatments is carefully considered. I, for one, should not care to see any addition to the usual triple antigen, and I think there is a good case for review of its composition with regard to the dosage of the toxoids.

Finally, if the results of the P.H.L.S. investigation were due to the use of a sub-standard antigen, could these figures have been better if the other components had not been unnecessarily potent?—I am, etc.,

GUY BOUSFIELD.

Broadbridge Heath,
Sussex.

REFERENCE

- ¹ Bousfield, G., and Holt, L. B. *British Medical Journal*, 1957, 2, 1213.

Unusual Effect of Fenfluramine

SIR,—I would endorse Dr. I. Oswald's opinion (27 December, p. 806) that fenfluramine is not a central nervous stimulant,

and therefore cannot be classed clinically with the amphetamines. In a pilot trial of fenfluramine (40 mg. daily for two weeks, then 80 mg. daily for two weeks) in 14 obese patients, who were not told the nature or purpose of the drug, none mentioned a stimulant effect and two reported drowsiness for a few days after starting the drug. Dr. Oswald states that sudden withdrawal after prolonged administration of fenfluramine can be accompanied by temporary mood depression. A few of our patients commented on this and one, who had a previous history of depressive illness, had a severe episode of agitated depression on stopping the drug, which she had taken for four weeks only.

These and other effects of fenfluramine are currently being investigated in a controlled study of this drug in the management of obese patients with rheumatic disorders.—I am, etc.,

DOUGLAS GOLDING.

Princess Alexandra Hospital and Harlow Group,
Essex.

SIR,—I was interested to read Dr. S. Brandon's letter (29 November, p. 557) in which he describes an 18-year-old youth with a long history of drug abuse who had been recommended to try Ponderax (fenfluramine) by friends who had used it to obtain a "high." None of the inquiries in which this unit has been engaged, involving both narcotic- and amphetamine-dependent persons, have provided evidence that Ponderax is being abused. While it would be imprudent to conclude that Ponderax is never taken for non-therapeutic reasons, since it is now appreciated that drug addicts typically use a wide diversity of drugs, at the same time it would be unwise to conclude that because a particular drug is taken intermittently by addicts it has been adopted as a drug of abuse.—I am, etc.,

D. V. HAWKS.

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Institute of Psychiatry,
London S.E.5.

Cost of Medical Publications

SIR,—Dr. D. A. Pyke (8 November, p. 366) asks whether Excerpta Medica ploughs back its profits in some way. Whatever profits are made by Excerpta Medica are, of course, ploughed back into the business as being a foundation it is legally impossible to do otherwise. No one will deny that £22. 0. 0. is a high price for the *Diabetes* publication, to which Dr. Pyke refers. However, we would like to ask Dr. Pyke on what grounds he bases his judgement that it is "too high." We on our side wonder what Dr. Pyke expects the cost of the corresponding volume for the 1970 International Diabetes Congress to be. Neither he nor we yet know how many pages this volume will comprise and, hence, quite obviously a sales price cannot yet be determined. On this subject we can certainly assure Dr. Pyke—although we would not expect such an assurance to be necessary—that the retail price of a book is not calculated on the assumption of a captive audience of medical libraries

which may feel obliged to buy the publication.

In the case of Excerpta Medica's abstracting publications, we accord libraries considerable financial advantages in the subscription rates.—I am, etc.,

P. A. WARREN.

Director,
Excerpta Medica Foundation.
Amsterdam, Holland.

Mental Illness and the Family Doctor

SIR,—Your leading article (13 December, p. 637) and Sir Denis Hill's new monograph¹ draw attention to "the vast load of neurotic suffering in the community" and "the admitted shortage of trained staff at all levels for coping. . . ."

For many years we have at the Tavistock Clinic been providing seminars for general practitioners in which to study the psychological problems encountered in general practice and now welcome the attention you give to the general lack of appropriate training for these doctors who carry the brunt of the work. On our side, at the Tavistock, we have to think constantly of how to evaluate and improve our methods and approach.

We have on our waiting list a number of doctors waiting to join new seminars on different days and I should be very pleased if it is possible, through your correspondence column, to invite a few more. We could then launch two more seminars shortly.—I am, etc.,

S. BOURNE.

Tavistock Clinic,
Tavistock Centre, Belsize Lane,
London N.W.3.

REFERENCE

- ¹ Hill, Sir D., *Psychiatry in Medicine*, London, Nuffield Provincial Hospitals Trust, 1969.

Postoperative Fibrinolysis

SIR,—Prolonged postoperative haemorrhage is usually associated with faulty surgical technique, although a haemorrhagic diathesis may occasionally be to blame. It is known that in heat stroke there is often a disturbance in the blood coagulation mechanism, particularly in the fatal cases.^{1 2} Hyperpyrexia as an abnormal reaction to succinylcholine during anaesthesia has been reported.³ A patient is presented here who showed evidence of fibrinolysis, and it is suggested that this may have been the result of a period of hyperthermia during and after anaesthesia.

A 62-year-old female patient presented with lower lumbar backache and right-sided sciatica of seven months' duration. A metabolic study revealed the diagnosis of hyperparathyroidism. It was interesting to note that in 1931 she had presented at the London Hospital with a pathological fracture through a bone cyst and that biochemical studies at that time showed hyperparathyroidism. Her abnormal biochemistry in 1931 returned to normal after the removal of a parathyroid adenoma by Sir James Walton. In this respect she was probably the first case of hyperparathyroidism to be diagnosed and successfully treated in this country. She had remained well until the development of her present symptoms. She was regarded as a case of recurrent primary hyperparathyroidism.

Parathyroid exploration was undertaken in July 1969 and a 300 mg. adenoma was removed. Anaesthesia was induced with thiopentone

followed by succinylcholine. The duration of the operation was one-and-a-half hours and it was performed on a hot, humid day with an operating room temperature of 32°C. (90°F.). The patient's temperature, as measured by a thermistor probe in the oesophagus, 20 minutes after the commencement of the operation was 40°C. (104°F.) and despite cooling with ice and fans it remained between 39° and 40°C. throughout the procedure. No abnormal bleeding was encountered during the operation. Her temperature remained elevated in the immediate postoperative period and four hours later, despite the presence of suction drains in the deep tissues of the neck, she developed extensive swelling and ecchymoses in the neck extending from the ears to the clavicles. Although the haematoma was mostly in the superficial tissues it was sufficient to give a minor degree of respiratory obstruction.

Her neck was reopened under general anaesthesia and a considerable quantity of semi-liquid blood clot was evacuated from the tissue plane between the platysma and the strap muscles. There was a general ooze from all the surfaces within the wound and many bleeding points were coagulated with diathermy. Two suction drains were inserted and the wound closed. There was a steady stream of blood along these drains, and at this time a defect in the clotting mechanisms was strongly suspected.

At the time of this emergency 5 ml. of venous blood was allowed to stand in a clean, dry, glass test-tube. Within three minutes it had clotted firmly. However, after a further 10 minutes the clot had completely liquefied and subsequently remained in this state. In this way a diagnosis of fibrinolysis was made. On the assumption that she had circulating fibrinolysins, the patient was given 500 mg. of Dicyclic (cyclonamine) intravenously. Four hours later there was serum only in the drainage tubes and no further bleeding occurred. The drains were removed the following day and she made an uneventful recovery with a cure of her hyperparathyroidism.

In this case a presumptive diagnosis of fibrinolysis was made on the appearance of whole-clot lysis. It is appreciated that this simple test did not distinguish between primary and secondary fibrinolysis but the subsequent beneficial effects of Dicyclic make the former more likely. We suggest that the high temperature in the operating theatre resulting from lack of air conditioning may well have caused or contributed to this patient's hyperthermia.

We wish to thank Professor C. E. Dent and Mr. D. R. Davies for allowing us to report on this patient who was under their care, and to Dr. Enid Bennett for her helpful advice.

—We are, etc.,

R. H. WHITAKER.
A. G. A. COWIE.
I. W. AITKEN.

University College Hospital,
London W.C.1.

REFERENCES

- Shiboleit, S., Fisher, S., Gilat, T., Bank, H., and Heller, H., *New England Journal of Medicine*, 1962, 266, 169.
- Shiboleit, S., Coll, R., Gilat, T., and Sohar, E., *Quarterly Journal of Medicine*, 1967, 36, 525.
- Purkis, I. E., Horreil, O., de Young, C. G., Fleming, R. A. P., and Langley, G. R., *Canadian Anaesthetists' Society Journal*, 1967, 14, 183.

Psychiatric Drugs Left at Home

SIR,—Lately (17 August, 1968, p. 424) we drew attention to a potential danger

awaiting psychiatric patients in their homes after discharge from hospital—namely, drugs acquired in the course of previous treatment and not destroyed.

The study suggested an association between age, affective disorder, recent physical illness, and drug leaving. It was also noted that a simple written appeal did not diminish the number of patients leaving drugs at home. Following the completion of the study therefore at the general hospital psychiatric unit concerned, a systematic attempt was made to collect the drugs of patients on admission, and the nursing staff continued inquiries until either a positive statement was obtained from the relatives that there were no drugs at home, or the drugs themselves were collected.

Last year 14% of relatives with medicines at home admitted to 2 bottles, 4.5% 3 bottles, and 3.5% to more than three. In the current analysis of the initial 71 patients 25% had 2 bottles, 21% 3 bottles, and 11.5% more than 3 bottles, suggesting that larger quantities were kept than admitted on a single inquiry. Altogether over the period examined 565 bottles containing 16,762 items were collected. A similar operation on a national scale would therefore remove from circulation something like 8 million items. Roughly 4% of the bottles examined contained mixtures of tablets, thus making a nonsense of the instructions on the bottle label. Of the tablets collected were 3,730 phenothiazines, 3,432 tricyclic anti-depressant tablets, and 3,307 azepide tablets. Surprisingly only 899 were barbiturate

tablets, and 1,107 tablets of all types usually prescribed as night sedation. It may be that a ratio of 10 psychotropic drugs to one of night sedation is as prescribed. On the other hand, it seems possible that night sedation is more often actually used as prescribed. The ratio is certainly consistent with the shift which has been observed in recent years in the type of medication used in self-poisoning.

In our operational study previously mentioned of 330 patients first admitted to hospital 147 were found to have drugs at home one week after admission, the source of prescribing being the general practitioner five times more frequently than the hospital service. Six months later 148 patients were found to have drugs at home, the ratio of general practitioner prescriptions to hospital prescriptions now being exactly one to one. Having now prescribed them, in view of the frequency of readmission in psychiatric illness, the hospital psychiatrist clearly has an extra responsibility to ensure that unused drugs are not overlooked and left in the patient's home in the course of later treatment.

We are indebted to Miss R. M. Tinker, F.P.S., and her staff for their analysis of the substances collected during a period of just over a year.—We are, etc.,

ASHLEY ROBIN.
D. L. FREEMAN-BROWNE.

Runwell Hospital,
near Wickford,
Essex.

Hospital Staffing Structure

SIR,—You kindly published a letter from the consultant staff of the Kettering and District General Hospital (26 July, p. 236) in which we rejected the report *The Responsibilities of the Consultant Grade*.¹ Since then many other doctors, as individuals, grades, and whole staff committees, have expressed similar views and rejected the document.

We were therefore most relieved to observe in the *Supplement* (27 December, p. 79) that the Central Committee for Hospital Medical Services on 12 December carried a motion by a large majority completely rejecting the report *The Responsibilities of the Consultant Grade* as a basis for discussion.

We are, however, extremely concerned to note that despite general opposition voiced in your columns, and despite the motion in the Central Committee for Hospital Medical Services, the identical proposals feature in the progress report on discussions between representatives of the Health Department and Joint Consultants Committee (*Supplement*, 6 December, p. 53). It is clear to us that the basic propositions are directly descended from *The Responsibilities of the Consultant Grade*. Worse still, they form the template for the manpower projection by the Department of Health and Social Security (*Supplement*, 6 December, p. 55).

After consideration of the progress report we remain equally concerned and equally opposed to the basic propositions. The figures of the manpower projection by the Department merely confirm our worst fears and suspicions. The proposals of the progress report, if implemented, would certainly alter drastically the nature of the consultant's job as we know it today. Further, the progress report does not seek to correct the imbalance between the members in training grades in various specialties; it does not realize that surgical

divisions will shortly become ineffective through lack of anaesthetists, and medical departments made ineffective from lack of radiologists and geriatricians. These major problems of staffing deficiencies in less-popular specialties and also in less-prosperous areas of the country remain unrecognized and unsolved.

We realize that a reorganization of hospital staffing is urgently required, but feel that the progress report is based on the same unacceptable principles as its immediate predecessor, and that it too should be completely rejected as a basis for discussion. We suggest that a fresh working party drawn from the Central Committee for Hospital Medical Services should be set up having a more representative and more informed membership to develop a realistic and generally acceptable staffing structure.—We are, etc.,

GEOFFREY MEDHURST,
Chairman,
Medical Advisory Committee.
PETER ANDREWS,
Chairman,
Medical Staff Committee.

Kettering and District
General Hospital, Northants.

REFERENCES

- The Responsibilities of the Consultant Grade*. Department of Health and Social Security, Department of Health for Scotland. London, H.M.S.O. 1969.

SIR,—Though the document entitled *Responsibilities of the Consultant Grade*¹ has been rejected as a basis for further discussion, the Health Departments are recommending its terms in relation to the staffing of new hospitals. The progress report (*Supplement*, 6 December, p. 53), which has been discussed in the regions was to be de-