ANY QUESTIONS?

We publish below a selection of questions and answers of general interest.

Use of Thrombotest

Q.—*How should laboratory reports on the thrombotest method of determining the prothrombin time be used to control anticoagulant therapy?*

A.—Blood for the thrombotest should be collected by a clean venepuncture, preferably using a plastic syringe. Nine parts blood is added to 1 part 3.13% sodium citrate and shaken. The test can also be performed with finger-prick blood in the laboratory. The laboratory will determine the clotting time obtained when 0.05 ml. of this blood is added to 0.25 ml. of the thrombotest reagent.

Each box of thrombotest ampoules is supplied with a prepared curve in which the coagulation time (seconds) is plotted against "thrombotest coagulation activity" (per cent.), and thus the result is expressed as a percentage of the normal. Patients on anticoagulant therapy should be maintained at a level of about 15% of the normal, the range being 10 to 25%. The clotting time in this therapeutic range will be from about 140 seconds (10% level) to 70 seconds (25%).

Experience has shown that better control of patients is obtained with the thrombotest than with the one-stage prothrombin time.[1] There is less frequent need for adjustment of dosage, a smaller dose often proves adequate, and there is a smaller incidence of haemorrhage as compared to that found in patients controlled by the prothrombin time. Further, precisely the same result should be obtained in any laboratory, since the reagents are standard, an obvious advantage when the patient is away from home.

REFERENCE

1 Douglas, A. S., *Anticoagulant Therapy*, 1962. Blackwell, Oxford.

Autotransfusion

Q.—*How may blood be collected from the peritoneal or pleural cavity for immediate autotransfusion? What are the contraindications, and is there a danger that the blood may have haemolysed?*

A.—Autotransfusion of blood from the peritoneal or pleural cavity is rarely performed. A possible indication, however, could be severe blood loss, such as may occur intra-abdominally from a ruptured ectopic pregnancy, when ordinary donor blood is not immediately available. This blood should be collected by paracentesis or during laparotomy into an anticoagulant, such as acid-citrate-dextrose solution used for blood collection from donors, and the flow assisted by negative pressure with a hand pump.

Autotransfusion of this blood is safe provided that it is certain that haemorrhage has occurred within the last few hours. On the other hand, it is undesirable to transfuse such blood when it has been in the abdominal cavity for longer than 18 hours. It is rare for a similar problem to arise in relation to accumulation of blood in the pleural cavity. Transfusion of blood which has been in the peritoneal cavity for longer than 24 hours may be associated with haemoglobinuria and jaundice,[1] and even acute renal failure.

REFERENCE

1 Mollison, P. L., *Blood Transfusion in Clinical Medicine*, 3rd ed., 1962. Blackwell, Oxford.

D.D.T. for Head Lice

Q.—*Are there any risks from constant applications of D.D.T. to the scalp for head lice?*

A.—A treatment for head lice recommended by W.H.O.[1] is an application of an emulsion concentrate (benzyl benzoate 68%, D.D.T. 6%, benzocaine 12%, and Tween 80 14%) diluted 1 : 6 in water. This kills the eggs as well as the active stages, so that treatment repeated at short intervals should not be required.

D.D.T. is not readily absorbed through the skin.[2] Studies on man have shown that a dose of 35 mg. D.D.T. may be taken daily for 18 months without producing any evidence of harm.[3] The use of D.D.T. for the control of headlice by the recommended method should carry no risk.

REFERENCES

1 *Recommended Methods for Vector Control*, 1963. W.H.O., Geneva.
2 Hayes, W. J., in *D.D.T. Insecticides*, Vol. 2, 1959. Birkhauser Verlag, Basle.
3 Hayes, W. J., Durham, W. F., and Cueto, C., *J. Amer. med. Ass.*, 1956, **162**, 890.

Social Class and Intelligence

Q.—*Is there a positive association between the social class of parents and the intelligence of their children? Has there been any recent research on this?*

A.—Research on this subject over the past 60 years is almost unanimous. There is a positive correlation between the socio-economic level of parents and their children's general intelligence test scores of approximately 0.35, and groups of children from middle-class families have a mean I.Q. score of about 15 to 25 points higher than that of working-class children.[1]

Since these studies refer to group averages they tell us nothing about individuals, and the overlap of the intelligence of the various social classes is large. Nor do these studies offer definite answers about causes of these differences. There are at least three major lines of explanation.

The first explanation is that the higher social classes have a superior genetic background. This is difficult to swallow, because there has been so much movement from class to class over the past few hundred years that most individuals must have very mixed social antecedents and genetic constitutions. Intelligence may, according to psychologists such as Sir Cyril Burt, be predominantly inherited,[2] but the basic inheritance must be fairly randomly distributed among most of the present social classes.

In the second kind of explanation it is argued instead that the higher social classes provide a more stimulating environment, such as more books, more talk, holidays abroad, visits to museums, and more parental interest in schooling. Recent research on these environmental explanations includes that of Douglas[3] and Bernstein.[4] The latter showed that middle-class children tend to receive far richer language stimulation and that upper, middle, and lower working-class children are virtually taught different languages, that of the latter being so simple and crude that much latent intelligence appears to be wasted.

The third kind of explanation is a partial one centring on the possibilities of a bias in intelligence tests, such as that the questions favour children from the middle-class and that in general such children conform better to verbal test situations. Psychologists have paid great attention to these biases, and they are certainly not large.

As for the hereditary and the environmental explanations, there is of course no doubt that both factors operate in the development of intelligence. Exact studies of the relative contributions of both are difficult, because favourable environment and favourable genetic background tend to go hand in hand and it is impossible to arrange for actual experiments on children to isolate these factors. The hereditary part may predominate, as Burt suggests, but favourable and unfavourable genetic backgrounds must exist in all social classes on account of intermixing, and virtually all psychologists and educators are agreed that the right kind of environmental stimulation accounts for at least a fraction of the intellectual differences, and we cannot afford to ignore this fraction.

REFERENCES

1 Eells, K., Davis, A., Havighurst, R. J., Herrick, V. E., and Tyler, R. W., *Intelligence and Cultural Differences*, 1951. University of Chicago Press, Chicago, Ill.
2 Burt, C., *Brit. J. educ. Psychol.*, 1955, **25**, 158.
3 Douglas, J. W. B., *The Home and the School*, 1964. MacGibbon and Kee, London.
4 Bernstein, B., *Educ. Res.*, 1961, **3**, 163.

Notes and Comments

Vaginal Pain from Semen.—Dr. G. X. TRIMBLE (Medical Director, Catholic Hospitals, Medical Education Foundation, Kansas City, U.S.A.) writes: In answer to a question ("Any Questions?" 16 October, p. 922) on what could be the cause of an intense stinging vaginal pain experienced repeatedly by a woman on initial contact with her husband's semen during coitus, your expert suggested the symptom might be due to sensitivity of a slightly atrophic vagina. Halpern reported[1] "an exceptionally rare case" of a woman who had a post-coital anaphylactic reaction. Seminal fluid skin tests indicated that she was hypersensitive to the glycoprotein in human seminal fluid. Perhaps the inquiring physician's patient is experiencing some type of an allergic reaction to her husband's semen.

REFERENCE

1 Halpern, G., *Med. Trib.*, 1965, **6**, 117.

Correction.—Owing to unforeseen manufacturing difficulties the clamp described in the article "An Easily Operated Incontinence Clamp" by Dr. L. E. Edwards (23 October, p. 985) can be supplied in Perspex only. The last sentence of the article should therefore read: "The clamp is being made and supplied in Perspex."