act on the patient at the conscious level, nevertheless it does alter behaviour by acting as a "stress." The most thorough exposition of the mode of action of E.C.T. to date has been that of Delay, of Paris,¹ who has not only described in great detail the physical and chemical changes resulting from E.C.T. but has also described its effects at the behavioural level, relating it to the work of Selye on stress. As pointed out by Dr. Mary Morison and colleagues (15 June, p. 696), the value of E.C.T. is not limited to cases of depression but in fact is equally successful in some forms of schizophrenia and also in confusional and organic conditions.^{2,3}

There is a difference between studying the biochemistry of diabetes, for instance, and studying the biochemistry of a functional psychosis. In the latter case each psychosis is controlled by a centre in the diencephalon and has its own *milieu bioélectrique*. This explains why a functional psychosis can appear or disappear quite suddenly. In this way it is analogous to a physiological cycle in animals such as broodiness in hens or hibernation in some mammals. In each case the whole pattern may disappear under the influence of stress. For centuries before the discovery of modern shock treatments psychiatrists had recorded cases of psychoses disappearing completely in response to stress.⁴ The virtue of E.C.T. is that stress is applied when the patient is unconscious, but this does not prevent him from reacting to a few milliamps of current passing through the brain as if it were a threat to life or a "stress."

Although research in the last generation has greatly increased the efficacy of E.C.T. and reduced its side-effects, nevertheless it is not used as widely as it should be, chiefly because its mode of action is not understood. If the application of electricity to the brain whether as a stress or not could be subject to the same amount of study as has been accorded to it in industry, the benefit to the anxious, the depressed, the deluded, the confused, and hallucinated would be immeasurable.⁵—I am, etc.,

A. SPENCER PATERSON.

London W.1.

REFERENCES

- 1 Delay, J., *Ann. méd.-Psychol.*, 1952, 110, part 2, p. 93.
- 2 Roth, M., and Rosie, J. M., *J. ment. Sci.*, 1953, 99, 103.
- 3 Fernandes, B., and Polonio, P., *J. ment. Sci.*, 1946, 82, 794.
- 4 Buvat-Pochon, C., *Les Traitements de Choc d'autrefois en Psychiatrie*, 1939. Paris.
- 5 Paterson, A. S., *Electrical and Drug Treatments in Psychiatry*, 1963. Amsterdam.

Coxsackie Virus Heart Diseases

SIR,—It was interesting to read your leading article on Coxsackie virus infections (13 July, p. 70) and the paper on cardiac manifestations during a Coxsackie B5 epidemic (13 July, p. 97) by Dr. M. Helin and colleagues. I have been particularly interested in the problem of adult heart disease due to Coxsackie virus B infection, and I had an opportunity to study 22 cases during the period of two years while I was working the department of cardiology at the Chicago Medical School and Mount Sinai Hospital, Chicago, U.S.A.¹

Adult heart disease due to Coxsackie virus infection is much commoner than is generally

recognized. In the absence of any epidemic of Coxsackie virus infection, we saw 22 cases in two years. Ten cases were diagnosed clinically as myocarditis, ten other cases had features of pericarditis, and two cases had combined features of pericarditis and myocarditis. Four patients presented with acute heart failure during the post-partum period. Many of the so-called post-partum heart diseases, especially those presenting with heart failure, may be due to Coxsackie virus infection.

Our experience revealed that a significant proportion of cases (5 out of 22 cases) may develop permanent heart damage with chronic heart failure, cardiomegaly, and electrocardiographic abnormalities.—I am, etc.,

G. S. SAINANI.

Department of Medicine,
Hammersmith Hospital,
London W.12.

REFERENCE

- 1 Sainani, G. S., Krompotic, E., and Slodki, S. J., *Medicine (Baltimore)*, 1968, 47, 133.

Notice to Police Surgeons

SIR,—Certain sterilized swabs produced commercially for bacteriological sampling are prepared by pretreatment with serum to preserve the viability of bacteria during transit to the laboratory. These swabs therefore carry one or other blood groups, which can interfere with the typing of seminal and other matter. The possible implication of this fact is that a wrongfully accused person might be the victim of a serious injustice, since an error could easily arise in assuming the origin of the samples.

Police surgeons and other doctors attending cases of this nature are therefore advised not to use such swabs. Until further information is available doctors should prepare swabs themselves, and in all cases a "control" unused swab should accompany any sample sent to a forensic science laboratory.—I am, etc.,

JOHN A. G. CLARKE,

Honorary Secretary,
Association of Police Surgeons of
Great Britain.
Dudley, Worcs.

Cancer in Childhood

SIR,—Your leading article on cancer in childhood (20 July, p. 136) prompts me to seek publicity for the work now being done and in prospect to improve the lot of children in England with solid tumours. Two committees have recently been set up at the instigation of the British Paediatric Association with the approval of the British Association of Paediatric Surgeons and with the active encouragement of the Ministry of Health. The aims are to secure the best available treatment for all children with solid tumours, and, because the best is as yet not good enough, to seek improved methods and to link with cancer research. Co-operation between all the many doctors involved is sought rather than the establishment of a special centre.

The committee for the Northern centres—the dividing line runs from the Severn to the Wash—acting mainly through the departments of paediatric surgery, is supervising

a co-operative trial of treatment for Wilms' tumour. Those London teaching hospitals which treat the bulk of children are co-operating with a cancer registry and advice centre recently set up with a British Empire Cancer Campaign research fellow by Professor A. W. Wilkinson in his department of the Institute of Child Health at Great Ormond Street. The committee hopes that records, diagnostic criteria, actual treatment by surgery, radiotherapy, and chemotherapy and follow-up plans can all be co-ordinated. No single centre handles a large enough number of children for analysis of results to be significant. In co-operation of the kind proposed, linked with cancer research, lies the only hope for improvement.—I am, etc.,

ALFRED WHITE FRANKLIN,

Chairman, Ad Hoc Committee on
London E.C.1. Solid Tumours in Children
(South of England).

Morphine for Accidents

SIR,—I must comment on the letter (20 July, p. 188) advocating that the police be given morphine to use at their discretion. Agreed that morphine still holds pride of place for relief of pain and anxiety, but no one should underestimate its potential dangers in unskilled hands. Morphine is a powerful respiratory depressant and its use could well extinguish the flicker of life that may be left in a severely injured person. After treatment for shock, the most important aspect of management of a casualty is diagnosis, and a very easy way to mask the diagnosis of serious injuries such as extradural haemorrhage, perforation of an abdominal viscus, gastrointestinal haemorrhage, is to give a dose of morphine.

In potentially lethal road traffic injuries morphine can bring analgesia and peace of mind, but it can also contribute to mortality. We must never saddle our police force or any other lay body with this tremendous responsibility.—I am, etc.,

A. S. RUSSELL.

St. Helens,
Lancs.

Seat Belts for Lorry Drivers

SIR,—I was recently called to an accident in which there had been a head-on collision between two lorries, while a light van was also involved. All three drivers suffered fractures of the skull. All three had fractures of the right ankle, two of which were fracture dislocations, and two had other severe injuries as well.

I have no doubt that there are two lessons to be learnt from this accident: none of the drivers was wearing a safety belt and, indeed, safety belts were not fitted. It seems to be extraordinary that, with all the recent publicity concerning the use of safety belts in motor-cars, lorries appear to have been ignored. Secondly, the design of the cab of the modern lorry, which sits either above or in front of the engine, leaves no protection whatsoever for the driver. I am certain that the fact that all three drivers suffered fractures of the right ankle joint suggests that they had their foot on the brake pedal when the front of the vehicle was stove in, and in