Disappearance of L-Dopa

SIR,—Since your leading article (24 June 1967, p. 783) on the successful use of dopa in the treatment of Parkinsonism, as previously reported in the *New England Journal of Medicine*,¹ there have been other reports of the efficiency of this mode of treatment. It has been glowingly reported by Alistair Cooke in the *Guardian* (3 February 1969) and splashed across the pages of *Life* magazine (11 October 1968). A controlled trial has recently been done in this country in post-encephalitic Parkinsonism and confirms the usefulness of the drug.²

Unfortunately this drug has always been very difficult to obtain in this country, and in the last few months it has virtually disappeared. This is a disgraceful situation that is hard for a doctor to understand, but it seems to be based on the apathy of some drug houses and curious take-over activities behind the scenes, somewhat reminiscent of the *Third Man*, by others. Is it not time that the British pharmaceutical industry was mobilized to serve a pressing need?—I am, etc.,

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London W.1.

REFERENCES

- 1 Cotzias, G. C., Van Woert, M. H., and Schiffer, L. M., *New England Journal of Medicine*, 1967, 276, 374.
- 2 Calne, D. B., Stern, G. M., Laurence, D. R., Sharkey, J., and Armitage, P., *Lancet*, 1969, 1, 774.

Testing Dialysing Fluids

SIR,—Miss Jeanette Blomfield and her colleagues refer (19 April, p. 141) to the published evidence of the readiness with which cellophane membranes pick up copper and zinc from tap-water and release them subsequently into whole blood. Such membranes may do the same with lead and cadmium, both of which are sometimes to be found in water, especially lead, where in its journey to the tap it has passed through the venerable plumbing of some of our more ancient hospitals. The amount of lead likely to be absorbed by the blood during dialysis is of course very small and much less than of copper. Cadmium was looked for because it is a contaminant of zinc.

This example of the uptake by one type of membrane of copper, lead, and cadmium from the water in one hospital and their subsequent release may be of interest.

	µg. Copper	µg. Lead	µg. Cadmium
Whole new membrane,			
Half unused membrane,			
after washing* before	307	11	†
use			
Half unused membrane,	605	132	7
after washing* after use	364	62	3

* Soaking for half an hour in water distilled in metal still.
† Not detected

It is quite easy to determine by atomic absorption whether dialysing fluids in any particular hospital contain excessive copper, lead, zinc, or cadmium, and if anyone cares to use our facilities for checking his own dialysis machines he should get in touch with me.—I am, etc.,

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Premedication for Hypotensive Anaesthesia

SIR,—I wish to draw attention to a clinical phenomenon which I have recently observed.

For micro-surgery of the ear, it has been my practice to achieve anaesthesia, with a bloodless operating field, by the following fairly standard method (assuming a healthy adult patient).

Premedication: Pethidine 100 mg. with atropine 0.6 mg. intramuscularly one hour before operation. Induction with a "sleep" dose (200–300 mg.) thiopentone, followed by topical anaesthesia to larynx and trachea (lignocaine 4 ml. of 4%), and intubation with a cuffed, armoured, endotracheal tube, using suxamethonium 50–75 mg. After return of spontaneous respiration, anaesthesia is maintained, and deliberate hypotension produced by D-tubocurarine chloride 20–30 mg. and intermittent positive pressure ventilation (8–10 l./min.) with a 2:1 mixture of N₂O–O₂ and halothane in sufficient concentration (generally 2–4%). This together with a 10° head-up tilt produces a systolic pressure of 60 mm. Hg in a previously normotensive individual.

This technique is easy and gives satisfactory operating conditions in almost all patients. The blood pressure is generally readily controlled, and the effects are rapidly reversible on ceasing the administration of halothane and giving neostigmine and atropine to overcome the muscle paralysis.

About three months ago I became interested in the use of fentanyl and droperidol as premedicant agents. During this period I gave these drugs to most of my patients; usually as 1–2 ml. (depending on weight and build) of a prepared mixture (Thalamonal (known in the U.S.A. as Innovar)—containing fentanyl 0.05 mg. and droperidol 2.5 mg./ml.).

After this premedication, atropine 0.6 mg. was given at induction; otherwise anaesthesia followed the course outlined above. Using this regimen for patients undergoing this type of procedure, I gradually became aware of a very definite increase in the number of patients who were markedly resistant to the hypotensive effect of curare and halothane.

Over a period of 2½ months I anaesthetized 22 patients who were previously within normotensive limits for various major micro-surgical procedures on the ear. In about half of these I was unable to bring the systolic pressure below 90–100 mm. Hg—despite using halothane concentrations of up to 6%, and increasing the ventilation to 15 l./min. After induction I found that the systolic pressure dropped rapidly to c. 90 mm. Hg, but would then fall no further. In most of the cases concerned, operating conditions were unsatisfactory, though none to such a degree as to necessitate abandonment of the procedure. In view of the already complicated polypharmacy, I did not feel justified in using specific ganglion-blocking agents. After this I abandoned the use of this form of premedication, since when the frequency of satisfactory results seems to have reverted to its former level.

The sharp initial fall in systolic pressure after induction corresponds with the observations of Norris and Telfer on Thalamonal as a premedicant.¹ It is well known that one of the actions of halothane in concentrations above 2% is myocardial depression, and a possible conclusion of these observations is that this is the primary cause of the hypotension produced by halothane and curare,

rather than the synergistic ganglion-blocking action of the two drugs.

These observations can only be reported as a clinical impression at this point, but it is intended to publish any interesting results which may be yielded by a more detailed and regulated study; although in view of the unsatisfactory operating conditions I do not consider it would be ethical to investigate the matter further in micro-surgery of the ear.—I am, etc.,

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REFERENCE

- 1 Norris, W., and Telfer, A. B. M., *British Journal of Anaesthesia*, 1968, 40, 517.

Avian-Battey Mycobacteria Infection

SIR,—Dr. W. B. Schaefer and others (17 May, p. 412) state, "If innate immunity to different species of mycobacteria has a common basis, the increase in opportunist infections is explicable by the growing proportion of highly susceptible persons in the community, spared by the recession of tuberculosis."

We have heard this suggestion before, as if with the fall in true tuberculosis one should anticipate a rise in disease, due to the atypical mycobacteria. This may be applicable in some countries. Western Australia, with a present population of just under a million, is an area of relatively high endemicity for Battey disease. While in the last ten years it has experienced the expected fall in disease due to *M. tuberculosis* (from 42.1 new cases per 100,000 in 1959 to 14.2 in 1968), the corresponding incidence of Battey disease has remained steady at around 1.5 cases per 100,000. This incidence represents one in every five patients from whom *M. Battey* has been isolated, all identifications in that period having been made or confirmed in the single State Reference Laboratory.

Admittedly many of Dr. Schaefer's patients were infected by *M. avium*, an organism which could possibly have different epidemiological features. We suspect, however, that the reported increase in avian-Battey disease based on investigation of specimens submitted to the Cardiff Reference Laboratory originates mainly from increased opportunities for recognition and awareness of these mycobacteria, and the use of modern sophisticated bacteriological diagnostic methods.—We are, etc.,

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Cervical Spine

SIR,—I was most interested in the paper by Dr. D. A. H. Yates on the cervical spine (28 June, p. 807). The complex anatomy of the cervical spine is occasionally further complicated by the presence of a paramastoid process which articulates or fuses with the transverse process of the atlas. This too can be the site of origin of chronic pain in the neck.