Correspondence

Because of heavy pressure on our space, correspondents are asked to keep their letters short.

New Drugs for Respiratory Insufficiency

Sir,—Your annotation on new drugs in the treatment of respiratory insufficiency (December 31, 1960, p. 1943) gives a very fair introduction to dichlorphenamide and THAM (trihydroxymethylaminomethane), but I think that potential users of these drugs should be more strongly warned about some of the possible snags. In the case of dichlorphenamide, there are three points I would like to make. Firstly, it should be cautiously administered to patients with severe acidemia due to respiratory failure because, whatever it does to the pCO₂, it is very likely to make the acidemia worse. This risk will be less serious in patients whose respiratory acidosis is fairly fully compensated (i.e., the blood pH is not far below normal). Secondly, it is an oversimplification to say that this drug lowers the pCO₂. It may lower the pCO₂ measured in blood removed from the body, but the pCO₂ in the tissue cells is very likely to be greater during dichlorphenamide administration. Thirdly, the inhibition of carbonic anhydrase may cause the pCO₂ of blood removed from the body to be lower than it is in the body, because the time elapsing between sampling and analysis allows hydration of CO₂ to continue, thus lowering the pCO₂. ¹ Rebreathing methods of estimating pCO₂ may therefore be preferable to arterial-blood measurements because they obviate this difficulty.

With regard to THAM, the risk of severe anoxia in patients with respiratory failure who are given this drug must be emphasized. If, in a patient with a low alveolar ventilation, CO₂ excretion through the lungs is reduced as a result of the administration of THAM, there may then be a maintenance of alveolar ventilation and therefore a reduction in pCO₂ and an increase in PO₂, or a maintenance of pCO₂ with a reduction in alveolar ventilation, and therefore a reduction in pO₂. It is not yet known which of these effects will be the more common, but, if the second one occurs to any extent, then patients receiving this drug who are already in respiratory failure and who are not receiving oxygen-enriched air will be exposed to very severe anoxia.

I apologize for making these points without supporting data, but the preliminary reports have already established that these drugs have such profound effects, indicating that they must be used with the greatest care. Until more is known, patients who receive them should preferably have their blood gases and pH carefully followed. Enthusiasm for the treatment of CO₂ retention must not be allowed to obscure the fact that the treatment of anoxia is usually a much more important problem in patients with respiratory failure. This remark is not, of course, meant to suggest that either of the two conditions should be neglected.—I am, etc.,

The Middlesex Hospital, London W.1.

E. J. MORAN CAMPBELL.

REFERENCE


Falling Asleep at the Wheel

Sir,—Everyone agrees that the number of road accidents is staggering, and that in spite of all deterrent publicity and legislation the number of killed and injured continues to rise. For a variety of reasons it is difficult to explain and reconstruct the course of events which precede serious collisions. Alcohol is rightly held to be responsible for many accidents, but I believe that the alleged "slowing down of reactions" is much overestimated as a cause of accidents.

Having myself driven for 30 years, seen a good many accidents, and thought about the physiological mechanics prior to the impact, I have come to the conclusion that falling asleep at the wheel must be by far the biggest cause of serious motor accidents. In very many cases nothing else could adequately explain the condition of and the situation at the impact; an accident in which a mother and two children were recently killed on the A4 road must, I believe, belong to the same group. I do not wish to exonerate drinking before driving—quite the contrary; I think severe legislation against this misuse is fully justified. I believe, however, that the mechanism leading to accidents after alcohol consists in its inducing sleep, particularly under the conditions of warmth and insufficient ventilation which prevail during winter nights when the car is driven with the heating switched on and the windows more or less closed. Every experienced driver knows the danger of falling asleep, and most of us have had the frightening experience of escaping an accident in the last fraction of a second when we have woken up "in the nick of time" after a second of unconsciousness.

The problem of falling asleep at the wheel is frequently discussed among drivers, and I have often been asked what remedies I could suggest to avoid it. Amongst the suggestions which I have heard about were: removal of shoes and driving in bare feet; rubbing in solid eau de Cologne over forehead and cheeks; smoking; "benzadrine" (amphetamine sulphate) tablets, etc. Driving without shoes is possibly the best of the suggested remedies. The only safe method of prevention, however, is to give strict instructions to drivers to stop the car in a safe place at the first sign of sleepiness and to try and find sleep. In the young, such sleep may last a considerable time; in middle-aged people sleep of a very few minutes is refreshing and completely dispels the feeling and the danger of impending sleep.

The purpose of this letter, Sir, is to suggest that sleep is the most frequent cause of grave motor accidents, although for various reasons people who were involved in such accidents may not care to admit this, may not even be aware of it themselves, or may no longer be able to say anything. In the present campaign for reduction of motor accidents the danger of sleep as a causative factor is badly neglected. The possibility of falling asleep at the wheel and meticulous prevention of this contingency deserve much more attention than they have hitherto received; all suggestions against it should be discussed, and reliable preventive methods recommended to the public.—I am, etc.,

St. James' Hospital, Balham, London S.W.12.

A. B. ALEXANDER.

Epidural Anaesthesia and Bed Rest in Sciatica

Sir,—We read with interest the article by Dr. E. N. Coomes (January 7, p. 20) comparing a series of cases of sciatica treated by epidural injection with a similar series treated by bed rest. The most disturbing thing was to see how slowly the cases in the bed-rest group recovered, the mean time being four and a half weeks.

This is contrary to our experience. We find that in those patients treated by us on bed rest at Sefion General Hospital, Liverpool, the pain had usually gone com-