DUAL BLOCK AFTER TACRINE

Sir,—Dr. Older and his colleagues (Brit. J. Anaesth., 1966, 38, 487) appear to be surprised at the occurrence of dual block after tacrine. Hunter (1965) found tacrine to be a disappointing antidote to tubocurarine and whilst the phase II block of suxamethonium is not identical, it is not surprising that the anticholinesterase activity of tacrine does not prevent such a block. I have been able to demonstrate repeatable post-tetanic facilitation in a large proportion of cases following the use of tacrine and suxamethonium.

I would question the need to postulate abnormal depression of the choline-acetylase system to explain the occurrence of a phase II block. The continued presence of suxamethonium at the motor endplate is probably the most important factor.

Even if depression of choline-acetylase is involved, this is not an indication for the use of neostigmine. Katz, Wolf and Papper (1963) found that after a cumulative dose of 2 mg/kg of suxamethonium they could demonstrate post-tetanic facilitation in all patients, but edrophonium could only be relied upon to reverse this phase II block in patients who had received a total dose of 3 mg/kg. (These doses refer to patients with normal pseudocholinesterase activity.) Vickers (1963) has emphasized the difficulties which can be caused by the use of neostigmine even when there is evidence of post-tetanic facilitation.

"It remains true that adequate patience is the best and least toxic therapeutic agent" (Vickers, 1963).

D. J. F. McDonald
Manchester

REFERENCES


A TEST OF TWO TYPES OF HALOTHANE VAPORIZER

Sir,—We were interested to read Dr. Hall and his colleagues’ paper on vaporizers (Brit. J. Anaesth., 38, 494) as we have been studying one of these, but in relation to the use of halothane in the closed circuit. While assessing the Goldman Mark III, we found that the temperature of the liquid falls with use, as does the percentage delivered, but the greater part of the fall occurs in much less than 30 minutes. For instance, on setting "2" at 7.5 l./min flow in the open circuit, the temperature fell from 18° to 8°C in 8 minutes; the percentage halothane delivered falling from 1.25 to 0.75 per cent in the same time. It is not clear from the text that the liquid halothane was allowed to warm up to room temperature between tests (if the temperature was measured) but if this was not done, subsequent or serial measurements of halothane concentration would be modified by the cooling of the liquid.

With regard to the conclusions drawn in the summary, it would seem inconsistent to say that the ability "to vary concentrations (of halothane) very accurately ... is not attainable in practice", when this was the method used to calibrate the halothane meters—using a Drager vaporizer.

If the question of expense is to be raised, surely the natural conclusion is to use the Goldman in a closed circuit, monitoring the inspired concentration of halothane with a meter. The saving of halothane would soon pay for the meter and the objectives of safety with economy would be achieved!

R. I. Bodman
K. Smith
London

Sir,—Dr. Bodman's last paragraph comes as music to my ears. For many years I have felt that the most sensible way of using halothane is in a completely closed circuit with oxygen. Some of the reasons which lead me to this conclusion are:

(a) economy;
(b) the high oxygen concentration possible;
(c) the conservation, admittedly to a small extent, of water vapour;
(d) the freedom from the risk of asphyxiating the patient with pure nitrous oxide should the oxygen fail;
(e) the administration of one drug rather than two (halothane and nitrous oxide).

With regard to Dr. Bodman's other comments, we tested all the vaporizers in our three hospitals and no vaporizer was used for more than one experiment. The temperature of the air close to the vaporizer was measured at the beginning of each experiment. Our tests were carried out on Fluotecs and Goldmans, as we specified. I believe our conclusions are consistent with the results of these tests. The vaporizer used for calibrating the halothane meter is not generally available in this country, did not form part of our investigation, and is, I understand, even more expensive than the Fluotec.

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London

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