

Correspondence

Because of the present high cost of producing the Journal, and the great pressure on our space, correspondents are asked to keep their letters short.

Action of Chlorpromazine and Promethazine

SIR.—On April 2 a discussion took place at the Royal Society of Medicine on the action of chlorpromazine and promethazine. In practical anaesthesia these two substances are used together with pethidine. In the discussion it became clear that anaesthetists are not much interested in the fall of temperature which chlorpromazine produces, and that these substances are used together for their peculiar anaesthetic action.

Since from the pharmacological evidence there is not very much to choose between these substances so far as their central action is concerned, would it not be possible for observations to be made in patients using only one substance at a time? It would be of great value to know whether a dose of 200 mg. chlorpromazine given alone would have different effects from 200 mg. promethazine given alone, or from 200 mg. pethidine given alone. It would be important that the observations on the effect of these substances should be made by somebody who did not know which of the compounds had been administered, in order to exclude preconceptions in making the comparison.—I am, etc.,

Oxford.

J. H. BURN.

Hibernation Anaesthesia

SIR.—Drs. Angus Smith and J. G. Fairer (*Journal*, March 27, p. 759) suggest that the case of "prolonged hypotension following hibernation anaesthesia" described by us (*Journal*, March 13, p. 645) was in fact due to surgical shock, the result of inadequate anaesthesia. In reply we would like to make the following points.

(1) The patient was a small—120 lb. (54.4 kg.)—frail, elderly woman. In accordance with usual pharmacological practice we considered that a reduction in dosage, in relation to age and body weight, was indicated. (2) The dosage of the "potentiating mixture" given (chlorpromazine 12½ mg., promethazine 12½ mg., pethidine 25 mg.) produced the usual picture obtained after its exhibition in the doses recommended by Smith and Fairer¹—loss of consciousness, slight hypotension, initial rise in pulse rate, lack of response to painful stimuli, ease of intubation without muscle relaxants. (3) At no time during the operation were there any signs of inadequate anaesthesia. The blood pressure levelled off at 80/45 mm. Hg; the pulse rate remained steady at 120/minute (pre-operative level 100/minute); there were no voluntary movements, no sweating, and no lacrimation. The "aliquot mixture of nitrous oxide and oxygen" would appear to have been sufficient for adequate anaesthesia, its effect presumably being potentiated by the "lytic cocktail." The indications for supplementary doses of "lytic cocktail" are a rise in pulse rate and/or blood pressure,¹ neither of which occurred during the operation on our case. (4) Our "hibernation anaesthetic" cases hitherto had awakened some 4–5 hours after the start of the hibernation, by which time the blood pressure was nearly at pre-operative levels. After the elapse of nearly four hours the case reported was still deeply unconscious and not reacting to deep painful stimulation. The usual picture of post-operative shock was absent (hypotension, hypothermia, clammy skin, cyanotic lips and nail-beds, rise in pulse rate, intense peripheral vasoconstriction). Although there was profound hypotension (50/20 mm. Hg) and hypothermia, the skin was quite dry, the lips and nail-beds were pink, the pulse rate was still 120/minute. We also feel that inadequate anaesthesia would have been accompanied by evidence of returning consciousness. (5) Chlorpromazine, according to Courvoisier *et al.*,² diminishes, abolishes, or reverses the hypertensive effects of

an intravenous injection of adrenaline, but in the same doses and conditions only diminishes the hypertensive effects of noradrenaline and even in high doses does not reverse the hypertensive effects of noradrenaline. (In view of our experience with this case under discussion, one of us has given 0.05 mg. noradrenaline intravenously to a patient whose blood pressure was 70/40 mm. Hg (170/90 mm. Hg pre-operatively) 40 minutes after the exhibition of a mixture containing chlorpromazine 50 mg., promethazine 50 mg., pethidine 100 mg. The blood pressure was raised immediately to 130/70 mm. Hg.)

We feel satisfied that the case under discussion was not suffering from traumatic shock, but appeared to be suffering from a continuing effect of the modified dose of the "lytic cocktail." Although similar results have not occurred in our other cases and have not been reported elsewhere, we felt justified in describing our experience and the method used to produce a favourable outcome.—We are, etc.,

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FRANK S. PRESTON.

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REFERENCES

- ¹ *British Medical Journal*, 1953, 2, 1247.
- ² *Arch. int. Pharmacodyn.*, 1953, 92, 305.

Carbon Dioxide Retention Simulating Curarization

SIR.—In your issue of March 6 (p. 565) Dr. C. V. Scurr recorded a case of "Carbon Dioxide Retention Simulating Curarization." In the *Journal* of April 3 (p. 820) Drs. T. C. Gray and E. S. N. Fenton report on a similar condition in one of their patients. To my mind, however, there is very little similarity between the two, and I do not think that the latter can be considered as offering confirmatory evidence of CO₂ retention as such.

In the case cited by Dr. Scurr, no periods of anoxia were recorded, and post-operatively "it was noted that such respiratory effort as was present was not marked by any urgency, neither was it accompanied by any tracheal tug, both of which features are usually present in cases of residual curarization." In Drs. Gray and Fenton's case, on the other hand, several periods of anoxia were admittedly experienced by the patient on each occasion, particularly on the second. Due to the pre-operative cardiac condition, it is more than likely that this anoxia was tolerated very poorly. At the conclusion of the second operation, "in view of the increasing cyanosis and distress, and loss of consciousness, an endotracheal tube was introduced." Surely this was gross anoxia. They then go on to state that the striking features of the patient on this occasion were "(1) inadequacy of the tidal exchange compared with the forceful chest movements and tracheal tug . . . , and (2) the bounding forceful pulse." Dr. Scurr attributes the features in (1) above to residual curarization, and not to CO₂ retention.

In view of the evidence, I venture to suggest that on both occasions Drs. Gray and Fenton's patient was suffering from the combined effects of O₂ lack and CO₂ excess—in other words, asphyxia. It is also very probable that there was some degree of residual curarization.—I am, etc.,

Beckenham.

P. M. F. MCGARRY.

Failed Forceps

SIR.—I was very interested to read Dr. R. Lisle Gadd's article on failed forceps (*Journal*, March 27, p. 735), which is a valuable contribution to the literature on one of the most serious complications that can befall a woman in labour. His article concludes that incomplete dilatation of the cervix (39%) is the main cause for failure, whereas in the Birmingham series occipito-posterior positions and deep transverse arrest of the head accounted for 56% of cases and incomplete dilatation of the cervix 20%.¹ Malposition of the foetal head was also 2½ times more common than undilated cervix in the Norwich series,² which has not been referred to by Dr. Gadd.