primary medical care attaining a high degree of efficiency without all the recommendations of the report.

In my view the report, if implemented, would result in the destruction of the best in primary medical care without putting anything worth while for either doctor or patient in its place.—I am, etc.,

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Ergotamine Tartrate in Migraine

SIR,—While Dr. W. E. Waters is to be congratulated on his clinical trial of ergotamine in the treatment of migraine (9 May, p. 325), there is a possible—indeed probable—fallacy in his method of assessment, the result of which was to throw doubt on the value of the drug over that of a placebo. He assumes that the effect (if it exists) will be seen within a short period of time ("The subjects were told to swallow two tablets as early as possible in each attack. Another tablet might be taken if relief was not obtained after half an hour.").

Now, ergotamine has one of the largest and most complex of molecules known among alkaloids, and it is by no means certain that the drug will be absorbed from the stomach in the time mentioned, and still less if the tablet is uncrushed and taken on a full stomach. Assuming that the property at issue (if it exists) is related to the known ability of the alkaloid to stimulate uterine contractions, the time relationship can be precisely measured. By intramuscular injection it averages 20 minutes, and by oral administration (the method used in the present investigation) it is very much longer, with an erratic and relatively feeble effect appearing after 40 to as much as 110 minutes.¹

From these known facts it can be deduced that an adequate trial of ergotamine in migraine would necessitate the giving of the alkaloid by intramuscular injection. If, however, the trial must needs be based on oral administration, the drug would best be given in the form of a well-crushed tablet washed down with adequate water, and administered at the very first warning of prodromal symptoms.—I am, etc.,

J. CHASSAR MOIR.

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REFERENCE

- 1 Moir, C., and Dale, H. H., *British Medical Journal*, 1932, 1, 1119.

Ergotamine Tartrate in Migraine

SIR,—Dr. W. E. Waters' interesting paper (9 May, p. 325) raises a number of points. Selection of patients by questionnaire is likely to draw subjects who differ in the severity of their migraine and in their own adaptation to the condition from those who are self-selected on clinical grounds. It might be expected that questionnaire-selected patients would similarly exhibit a greater incidence of side-effects to ergotamine than clinically selected patients. Most recommendations allow up to 6 or 8 mg. of ergotamine (as opposed to the maximum of 3 mg. administered in this study) to be taken orally in a single attack even when combined with

xanthines, which in animal studies at least have been shown to facilitate the absorption of ergot derivatives.¹ Oral absorption of ergotamine alone has been said to be variable and unpredictable,² and there has been reference to delay in disintegration and absorption of ergotamine preparations which forms a general hazard in clinical trial formulation.³ Speed is acknowledged to be important in the treatment of the migraine attack, and a tablet which disintegrates or is absorbed slowly is unlikely to be very efficacious.

Clearly, therefore, there are a number of possible explanations for the ineffectiveness of ergotamine in this careful clinical study, and certainly one would agree with the need for further evaluation of therapy. However, the development of a clinical-pharmacological measure seems preferable to purely subjective clinical assessments in that it would provide a model for the assessment of any new candidate drugs, clinical trial or revised formulations of new or existing drugs, routes of administration, and the value of the xanthine caffeine with the utilization of relatively small numbers of subjects.—I am, etc.,

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REFERENCES

- 1 Berde, B., *Third Migraine Symposium*, London, 1969.
- 2 *Martindale Extra Pharmacopoeia*, 25th Edition, p. 590. London, Pharmaceutical Press, 1967.
- 3 Freestone, D. S., *Lancet*, 1969, 2, 98.

Prophylaxis of Migraine

SIR,—The prophylactic treatment of severe migraine is indeed fraught with difficulties (9 May, p. 327). So far methysergide is the most effective drug available, but it has side-effects. To minimize these it has been suggested that there should be a break in the drug treatment every six months or every year.

In a recent case that I was treating for this condition (7 March, p. 605) this advice had been carried out, but pleural fibrosis still resulted. It is probably impracticable if not inadvisable to carry out repeated renal tract and respiratory tract x-rays on patients who may be on this drug for a long time, and I feel that a better lead to impending complications might be a raised sedimentation rate.

Provided that there was no infection or other obvious reason for a rise in the sedimentation rate, then when this occurred it would act as a warning that the drug should be stopped and investigations carried out.—I am, etc.,

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Undergraduate Medical Education

SIR,—Dr. J. S. Ross (23 May, p. 479) has performed a valuable service in drawing attention to an aspect of the Todd report¹ which has not been adequately discussed. The length of the report itself may have been responsible for the concentration of attention to specialist and vocational registration and allowed many of the more serious implications for the profession to

pass apparently unnoticed. Dr. Ross rightly asserts that the crux of the report lies in the recommendations for undergraduate training, and that if these were accepted a longer period of training following qualification could not be avoided.

Paragraphs 209-297 should be studied with care by the whole profession and their serious implications for the future of medicine fully understood. In re-reading these paragraphs the composition of the committee should be reviewed, together with Appendix I (bodies and individuals approached to give evidence). Can it really be considered satisfactory that a committee formed to review medical education should have a medical majority of only one, that the chairman should be an organic chemist, and that two social scientists should have been included, one of whom was a prominent member of the Seebohm committee and an *éminence grise* of a Government department? It would seem that the latter were successful in persuading the remaining members that they were on the whole ill-educated, and although humility in the more senior members of our profession should always be applauded self-abnegation can be taken to extremes. Has not the time come for our profession to emulate the control by lawyers over their own affairs and refuse to accept changes in the health services determined for example by a mathematician turned economist (Beveridge report²); a banker, various social scientists, and a single medical representative (Seebohm report³); and finally, Todd?

I would conclude by commenting further on those paragraphs to which Dr. Ross made specific reference. Paragraphs 225-226 state that the minimum period of clinical study should be reduced in future courses and that the aims of the clinical stage of the undergraduate course should be: "To demonstrate the application of medical and behavioural sciences to the practice of medicine thus giving the student an appreciation of biological environmental and personal factors which underlie structural disease and disturbances of function"—thus equating with medicine a subject of whose scientific basis its practitioners themselves have expressed their uncertainty.

It is perhaps fair to indicate that the report states its aims as being to consider the disease phenomenon as a whole, to review present and future knowledge, to provide a basis in clinical methodology (*sic*), and to encourage the treatment of patients as persons rather than cases; surely, however, a superfluous restatement of the purpose of medical education, whose continuity can be demonstrated for over two thousand years.

Finally, it is both pretentious and unfortunate for the Commission to assert that its proposals would ensure that the student had "assimilated the ethos of medicine." The report is designed effectively to destroy it.—I am, etc.,

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REFERENCES

- 1 Royal Commission on Medical Education, 1965-68, *Report*, Cmnd. 3569. London, H.M.S.O., 1968.
- 2 Social Insurance and Allied Services, *Report*, Cmnd. 6404. London, H.M.S.O., 1942.
- 3 Local Authority and Allied Personal Social Services, *Report*, Cmnd. 3703. London, H.M.S.O., 1968.