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.

Haematological Applications of A.C.T.H. and Cortisone

SIR,—While I have no clinical contribution to offer in the controversy concerning the haematological applications of A.C.T.H. and cortisone, some of the experimental findings of my colleagues and myself in studies of animal bone marrow may be relevant. Our work started in 1944[1] when, in an attempt to solve the mystery of the large numbers of lymphocytes daily leaving the blood, we began to apply quantitative methods to the study of the cell content of bone marrow. We used the costal marrow of the rabbit. The technique was unsatisfactory in several respects, but, taking all these into consideration, we concluded at that time that the number of lymphocytes normally present in the bone marrow was of the same order as the number daily leaving the blood.

In the meantime, Dougherty and White[2] had reported that A.C.T.H. and 11-oxysteroids exerted a lymphoclasic action. Though unable to confirm their results in either blood or lymphoid tissue,[3] and though with cortical extract in the dosage employed we actually induced a lymphoid tissue hyperplasia, we nevertheless felt that without accurate knowledge of the bone marrow it was difficult to assess changes in the circulating blood, such as eosinopenia or lymphopenia. Accordingly, after numerous trials, we found that the bone marrow of the guinea-pig humerus lent itself much more effectively to quantitative study, and we proceeded to investigate the effects of single doses of A.C.T.H. and cortical extract ("eschatin," Parke, Davis & Co.) on the bone marrow.[4] We found no marked change in the marrow eosinophils, but, somewhat to our surprise, a significant increase in the marrow lymphocytes instead of the anticipated decrease. This seemed worth following up, and accordingly we treated a further batch of guinea-pigs with daily injections of A.C.T.H. for 7 days.[5] This time, though there was a slight increase in the lymphocytes and no definite change in the eosinophils, there became evident an increase in both the myeloid (neutrophil) and erythroid cells of the marrow.

However, one injection of A.C.T.H. daily did not seem to be the best way of giving this substance. Furthermore, it was thought that more precise information might be obtained by using individual steroid compounds. Accordingly, together with Drs. Ancill, Holt, and Owen Smith, we gave daily injections of cortisone (5 mg. per injection) for 7 days to 30 young male guinea-pigs. A detailed account of these experiments is at present being prepared for publication, but in view of the correspondence in your columns a brief summary of the results may be of interest to your readers.

As compared with 30 control animals—and despite what our endocrinological colleagues told us about the relative refractoriness of the guinea-pig to cortisone—there is a statistically significant increase in the absolute count of the nucleated cells of the bone marrow, so appreciable that it is reflected in an increase of the specific gravity also. The change affects both the myeloid (neutrophil) and erythroid cells, but more especially the latter, to such an extent that one is tempted, even apart from the present controversy, to speculate on a possible function of steroid compounds as erythropoietic stimuli.

Ten experiments with hydrocortisone (free alcohol) gave similar results. Seven experiments with compound A appear to give evidence of increased transformation of reticulum cells to granulocytes, with what may be a short-circuiting of the typical myeloblast stage. However, neither the eosinophils nor the lymphocytes of the bone marrow underwent any striking changes, and the mystery of the latter remains as elusive as ever.—I am, etc.,

Bristol. J. M. YOFFEY.

REFERENCES

1 Yoffey, J. M., and Parnell, J. (1944). *J. Anat., Lond.*, **78**, 109.
2 Dougherty, T. F., and White, A. (1944). *Proc. Soc. exp. Biol., N.Y.*, **53**, 132
3 Yoffey, J. M., and Baxter, J. S. (1946). *J. Anat., Lond.*, **80**, 132.
4 —— Metcalf, W. K., Herdan, G., and Nairn, V. (1951). *British Medical Journal*, **1**, 660.
5 Hudson, G., Herdan, G., and Yoffey, J. M. (1952). Ibid., **1**, 999.

The Perennial Peptic Ulcer Palaver

SIR,—May I express my pleasure in reading Sir Robert Hutchison's grand remonstrance on peptic ulceration (August 30, p. 513)? It is an honour to have one's breeches taken down by such a master of the art. I have received verbal chastisement at the same hands before, but never so pleasantly phrased.

In framing my reply, my chief difficulty is that I agree with everything that Sir Robert wishes to say to me. I always seek surgical advice for patients with chronic ulcers, both before and after haemorrhage, though my confidence in this course has been slightly shaken by a sideways glance at that part of the letter addressed to the surgical Ogilvie (in the light of whose reputation the lesser Ogilvies shine with reflected glory).

In conclusion may I, through you, Sir, tell Sir Robert of the keen pleasure which it has given to his many friends in Newcastle to read a letter from him composed in the old authentic style. We can almost hear him saying, "Hoots, toots," once more.—I am, etc.,

Newcastle-upon-Tyne. A. G. OGILVIE.

SIR,—I am without an answer to Sir Robert Hutchison's gentle banter (August 30, p. 513), except to particularize Arthur Hurst's remark by saying that the worst thing that happened to gastric surgery was the remarkable success of a usually unsuccessful operation in the case of the President of the Royal College of Physicians.

Dr. H. Maitland Moir (p. 514) is not alone in regarding the stomach purely as a producer of acid. Meulengracht and others have shown that the cardiac glands and the glands of the pars pylorica secrete an alkaline fluid rich in mucus, and more recently J. N. Hunt has studied the alkaline factor in gastric secretion: in the summary of a recent paper[1] he says: "A reduction in the concentration of acid in the gastric contents does not necessarily mean a reduction in the amount of acid secreted. Duodenal regurgitation is of only minor importance in neutralizing the acidity of the gastric contents. Most of the alkali is secreted by the stomach."—I am, etc.,

London, N.W.8. HENEAGE OGILVIE.

REFERENCE

1 *Guy's Hosp. Rep.*, 1949, **98**, 185.

A Gastric Gossip

SIR,—Mr. Peter Konstam, having added (September 13, p. 614) some interesting facts from West Africa to the discussion of Sir Arthur Porritt's gastric gossip, emboldens me to produce a few from East Africa. There we find a considerable variation in the diseases amongst the tribes for very similar reasons to those quoted for West Africa by Mr. Konstam. In Uganda, with which I am most familiar, besides the tribes of the territory we have a considerable number of immigrants from the Belgian Congo.

Up to recent years the incidence of peptic ulcer in Uganda appeared to be very small. In a review of 1,020 necropsies done at the Kampala Government hospital prior to 1949 evidence of gastric ulceration was found in only 3 cases. These figures are not easy to understand, as my colleagues just over the border in the Belgian Congo have been operating on peptic ulcer patients for more than 10 years.

In June this year, in Uganda, I reviewed patients treated by us in the previous four years at Mengo Hospital, Kampala, and out of a total of approximately 10,000 in-patients