Correspondence.

"Audi alteram partem."

THE OUTLOOK IN DENTISTRY.

To the Editor of THE LANCET.

SIR,—In your leading article of June 5th on the outlook in medicine and dentistry it is stated that "Even if they devoted their whole time to school work the existing dentists could not cope with the needs of the 5,750,000 school children while neglecting the rest of the population." Instead of the figure given, evidently elementary school children, let us take the number of children in England and Wales alone between 4 and 14 years of age, roughly 7,000,000, almost one-fifth of the entire population; and suppose we have started clinics with all our 5000 dentists full-time, having obtained the consent of all the parents to full treatment; deduct 3 per cent.—i.e., 210,000—as having naturally perfect teeth, leaving 6,790,000 to be treated, which gives 1358 children to each dentist, or, after allowing for administration and inspection, 1500 each. As there would neither be part treatment nor casual cases, this number could, without undue fatigue, be made dentally perfect—that is, every saveable tooth filled or otherwise treated, and every unsaveable tooth removed within one year, after which 700 dentists, or one to every 10,000 children, could keep them in that state, inclusive of treating those entering each year; while the remaining 4300 dentists could tackle the children of Scotland and Ireland and then the adults of the United Kingdom in sections of 10 years of age, leaving behind in each section one dentist to each 10,000, or for the 46,000,000 in the United Kingdom 4600 dentists. This is the ideal.

The real is, that if we appointed 5000 dentists for this purpose 4300 would have to "kick their heels," excepting only those in areas in which a dental clinic has been in existence for some years, where this system might be tried with advantage, forming training schools for those entering the school service, thus giving six months to a year of intensive training, which could not be got elsewhere, before taking charge of a clinic, at present some are started on wrong methods, which require subsequent strenuous labour to right, such training would obviate this. Where no dental clinic exists the great majority of the parents object to dental treatment for their children, except for the relief of pain, and, anything in the nature of compulsion, until the great majority are converted, would lead to active antagonism.

At the present time not more than 1000 dentists, inclusive of inspectors and teachers, could find sufficient work to keep themselves busy, and that number would be ample to eradicate dental disease to the extent of 90 per cent. or so within the next ten years; but these men must be not only qualified but must be men of experience in the first instance, capable of giving sound training to younger men, and the work must be of the best and most enduring quality, so as to reduce to a minimum the need for subsequent treatment throughout the child's life, otherwise the whole system will be a fiasco. Needless to say, a sufficient number of such men cannot be got for anything like £350 or £400, so often offered; but, given prospects equal to what obtains in other lines of life, a plentiful supply is at hand, which would be readily augmented by the time that a full system could be inaugurated, once it were known that the remuneration would be in proportion to the expense and study involved.

In your report of the President's address to the General Medical Council (p. 1235) the increased number of dental students in 1919—viz., 612—is given as a hopeful sign; during the years 1912–15 inclusive 1208 were registered, for the years 1916–19 inclusive 1074, a considerable fall, indicating also that the number for 1919 is mainly made up of some of those who delayed their course on account of the war, while it also includes assisted ex-service men. No parent knowing the facts will dream of wasting his money, or his son's brain-power, in such a line, unless he has sufficient capital to enable him to cater only for

the wealthy—a class of man we do not desire to enter the profession, otherwise the prospects in private practice for the young man are well-nigh hopeless, "tied hand and foot," wearily waiting for merit to tell, while the unskilled canvass and advertise all around him, using titles indistinguishable from, but often more high sounding than, his, an unjust competition which does not affect the long-established man to any great extent. The scarcity is not yet really serious, but is accentuated by faulty distribution, want of organisation, the wastage of skilled energy in the production of beautiful, though often unnecessary and vulgarly placed, specimens of the goldsmith's art, and time lost in ultra-conservative treatment, where radical treatment would in many cases prove to be the more conservative in the long run. If 44,522 medical men are sufficient, after allowing for faulty distribution, for the rest of the body, surely 5455 dentists are not far short of what should be required for the teeth alone.

This scarcity of dentists scare is being pushed for all it is worth by those who wish to be put on the Register, "with all the legal rights, privileges, and status, as are conferred by the Dentists Act, 1878, upon dentists," because they find that the competition of the steadily increasing number of persons practising like themselves, to which is added the steady awakening of the public to the difference between a dental surgeon and the keeper of a "dental surgery," is becoming too great. They hope to get the status, &c., that the Government will join with them in this fraud on the public, and once safely in, to slam the door upon anyone who cannot prove himself to have been for five years at least "an uneducated, untrained person, practising as a dentist, performing surgical operations on the teeth and jaws, doing untold damage and casting undeserved odium and dishonour on a scientific profession"—vide report on the Dentists Act. I blush for the members of our profession who agree to have them on our Register, as medical men would had any of their members proposed to put all the venereal and other quacks on their Register, on the strength of vested interests. It is a most vicious precedent.

As a school dentist I trust that something will speedily be done to protect those children now leaving school with perfectly healthy mouths, mainly due to clinic treatment, from such men, many of whom are utterly unscrupulous, one of their favourite tricks being to advise wholesale extractions for tartar-coated teeth.

I am, Sir, yours faithfully,

A. SHERWOOD ANDERSON,

Northampton, June 15th, 1920.

School Dental Officer.

RESEARCHES ON THE TREATMENT OF BENIGN TERTIAN FEVER.

To the Editor of THE LANCET.

SIR,—I read with the greatest possible interest and with considerable profit the valuable contribution of Major H. W. Acton, I.M.S., on this subject published in your issue of June 12th. It contains much solid and practically useful information regarding the alkaloids of the cinchona plant. Indeed, one looks upon this paper and another issued by Major P. M. Rennie, I.M.S., both records of the work done in the Dagshai Malaria Dépôt for British Troops, as among the most useful documents on the treatment of malarial fevers by quinine and its alkaloids that have been published. Having had something to do with the establishment of the malaria dépôt at Dagshai I watched the work carried on in it with exceptional interest. I am in a position to vouch for the accuracy of the details of the work of the first series of cases published by Major Rennie, and am also satisfied that those of the second series now under reference are *pro tanto* absolutely reliable. Major Acton's work was on similar lines to the admirably worked out and complete series of observations made by Professor J. W. W. Stephens and his collaborators and published in the *Annals of Tropical Medicine and Parasitology*, 1919.

There are a few points in Major Acton's paper with which I do not find myself altogether in agreement, and to which, with your permission, I will take the liberty of alluding. Major Acton has admitted that some of his

opinions are opposed to long-standing beliefs regarding the effects of quinine in malarial infection in India.

1. His recent work leads him to conclude that the malignant tertian parasite is more amenable to complete eradication under the curative use of the salts of the quinine alkaloid of cinchona bark than the benign tertian parasite. The reverse has been the opinion always held in India. In his paper he admits that he only dealt with 15 cases of malignant tertian infection, and I know from my own notes that there was only one case of malignant tertian infection in the first series—that is, Major Rennie's—which dealt with the Dagshai cases up to Sept. 30th, 1918. I do not include the diagnoses made regarding the cases on the plains anterior to their being sent to Dagshai, as I am of opinion that these latter diagnoses should not be included by Major Acton, who, I take the liberty of remarking, would be on safer ground if his deductions were based on observations actually made by himself and his colleagues. If this view is accepted, then one is disposed to consider that the number of malignant tertian infections dealt with by him and his collaborators is scarcely sufficient to justify a definite conclusion as to the relative curability of this type of malaria by quinine as compared with the effects of quinine in benign tertian infection. I would suggest that a much more extensive series of observations of the same kind on malignant tertian infection are necessary before arriving at any positive conclusions as to its curability compared with other types of malaria by quinine salts. I fully admit that Major Acton has made out a strong case in support of his statement that quinine acts as a steriliser of the blood in connexion with *Laverania malarie* infection—that it has a more decidedly specific action on this parasite than on the other two, and he has brought forward a series of facts not easy to refute.

2. My own experience in India and Burma, which goes over 28 years and includes something in the neighbourhood of 200,000 cases of malarial infection, indicates that benign tertian infection forms probably over 75 per cent. of the malarial infections met with, and not 50 per cent., as stated by Major Acton. My observations were carried out almost all over India. This is the general average for an entire year. The ratio of benign tertian and malignant tertian infections in many parts of India varies with the period of the year, the percentage of malignant increasing and that of benign tertian decreasing during the autumn. This is specially brought out in the malaria of our extensive N.-W.F. Provinces. I do not believe this difference to be due to raised atmospheric temperature, as appears to be the case in temperate climates; it is, I submit, owing to some undiscovered factor in connexion with the life-history of malaria-bearing anopheles. One has investigated malaria at all periods of the year in India, Burma, and Mesopotamia, and knows that it is necessary to continue observations for a whole year before anything like a true record of the ratios as to the types of malarial infection is to be obtained for each locality, district, or cantonment.

3. The difficulty of completely eradicating *Plasmodium vivax* from the blood appears to be proved by the work done in the Dagshai Malaria Dépôt; this was also well brought out by Professor J. W. W. Stephens and his co-workers during the great war, and should cause many to revise their opinion as to the innocence of this type of malarial infection. I have long been of opinion that benign tertian malaria is a much more important type of infection in India, both as regards direct and indirect mortality and the extent of morbidity it gives rise to, than malignant tertian infection. One published many statements to this effect years ago. The following is abstracted from "Prevention of Malaria in India," 1911, p. 100:—

The vast majority of the cases of malaria in India consists of simple tertian, which is considered by most authorities to be the easiest form of malarial infection to eradicate from a locality and from infected persons. This does not correspond altogether with the experience of many experts in India. Notwithstanding statements to the contrary, the largest number of relapses occurs in cases of simple tertian fever. During the last ten years one has had opportunities of watching and following relapses in localities where there is no initial malaria, and 79 per cent. of these were simple tertians, over 20 per cent. malignant tertians, and only a small fraction quartans. The generally accepted statement also that perniciousness is confined to malignant tertian is opposed to one's experience, as one has seen such conditions as algid paroxysms, choleraic attacks, cerebral attacks, and even hyperpyrexial phenomena associated with simple tertian infection, whilst a fair proportion of cases of repeated simple tertian relapses or reinfections end in malarial cachexia. In discussing the subject with medical men of wide knowledge of Indian malaria it has been ascertained that one's experience in this respect is not exceptional.

4. I am not altogether satisfied that an incontestible case has been made out by Major Acton for the exclusive use of the combined cinchona alkaloids (we used to call them the *mixed alkaloids* 30 odd years ago) in benign tertian infection, but he has shown rather forcibly that they should be subjected to a further extensive trial carried out on scientific lines. They were very largely used in the out-patient department of the Medical College Hospital, Calcutta, a

generation ago, where we had about 100 cases of malarial infection attending every morning, and one remembers that a fair proportion of these cases rejected their dose shortly after swallowing it. The use of tablets of the mixed alkaloids, as suggested by Major Acton, would probably to some extent remove this disadvantage.

Two sections of the paper under reference—The Effect of the Total Alkaloids of Cinchona Bark on Benign Tertian Infections and Effect of the Cinchona Alkaloids on Benign Tertian Infections—are of profound interest. They deal with an aspect of the therapeutic uses of the products of the cinchona bark regarding which we have been too long in ignorance, and they indicate the necessity of combining the work of a highly-trained chemist with that of clinicians and parasitologists in medical institutions carrying out original researches on malaria in India. It appears to me that the work which Major Acton has been doing in connexion with the mixed alkaloids might with great advantage be extended to inquiries regarding several of the individual alkaloids of cinchona bark.

I was very pleased to notice that Major Acton considers that the microscope is not sufficiently employed in the diagnosis of malarial infections in India.

It is specially gratifying to learn that Major Acton is now labouring at home endeavouring to give practical application to the excellent work he was doing at Dagshai.—I am, Sir, yours faithfully,

P. HEHIR,

London, June 14th, 1920.

Major-General, I.M.S. (retired).

ABDOMINAL EMERGENCIES.

To the Editor of THE LANCET.

SIR,—I beg to be excused for sending so belated a reply to Mr. A. G. T. Fisher's criticism (April 17th) of my paper on Abdominal Emergencies published in THE LANCET of April 10th. Several points struck me at once on reading it.

1. He had evidently not read the cases carefully.

2. He had missed the chief point of the paper—viz., a plea for an exact diagnosis, and, the natural outcome of this, to act on the diagnosis made.

3. The cases he mentions convey quite a different impression in his description than they do from reading my notes of them; in other words, he gives them the complexion he wishes them to have.

4. His opinion appears to be based entirely on statistics he has been able to collect, and in no place does he lead me to suppose that he has had any personal experience in "civil" abdominal emergencies.

5. I feel that his remarks are, to say the least, ungenerous when he applies such terms as "apparently," "gambler's throw," and "considered to be" to what we considered at the time as definite diagnoses.

Apart from this, perhaps I may be allowed to comment on his letter. In ruptured duodenal ulcers he has apparently not seen a case such as we diagnosed No. 15 to be, although they are by no means rare, and within a fortnight of writing the published paper I had another. This was a patient, aged 25, admitted six hours after perforation. He was diagnosed correctly in detail by the house surgeon and myself independently; he was operated on at once and the diagnosis confirmed, the ulcer presenting a minute perforation which was already closed. The fact, too, of Case 15 being perforated 36 hours seems to mean nothing to him, and in his consideration of statistics he has overlooked the relative recovery-rate, according to the interval between perforation and operation.

From his criticism of Case 4, the appendix abscess which was left alone, two conclusions are obvious: (1) in such cases the frequent passage of small quantities of mucus conveys nothing to him; and (2) he did not accept the diagnosis that the abscess was "pointing" in the upper part of the rectum, although this was verified within 24 hours.

In reference to his criticism of Case 2, the female child with pneumococcal peritonitis, I should like to ask him what operation he thinks would be of any use in such a case. If he is thinking of drainage, I should have thought that his experience as surgical specialist, R.A.M.C., would have taught him the futility of a drainage-tube in a diffuse infection of the peritoneal cavity, where no large quantity of free fluid was present.