

of treatment, such as the arrest of the morbid process, the restriction of the invading host, and the neutralisation of the poison, Dr. Ewart remarks that the individual means to these ends may be inadequate at first or even mistaken. Inadequate doubtless, but perhaps not so much mistaken, provided our means are checked by the very definite method of blood examination which has been elaborated by Leishman and by Wright and Douglas. The amount of protective substances in the blood: those natural antitoxins which the latter observers have rather happily termed "opsonins," can be accurately estimated in any individual case of infectious disease and affords a true index of the patient's condition. The process is rendered both easy and speedy by the now celebrated method of Leishman, as modified by Wright. That the blood serum (not the corpuscular elements) contains a substance (an opsonin) which effects a chemical interaction with the bacteria so as to prepare the latter for phagocytosis seems to have been definitely determined quite recently by Wright and Douglas. In the case of two specimens of blood of conspicuously different phagocytic power the corpuscular elements were separated from the fluids and an interchange effected. "The leucocytes of the successfully immunised patient exhibited in these circumstances the lesser phagocytic action characteristic of the blood of the normal individual who served as a control, while the leucocytes of the normal individual exhibited the increased phagocytic action characteristic of the blood of the successfully immunised patient."¹ By counting the number of organisms (from an artificial culture) which the washed cells of normal blood when mixed with the patient's serum can ingest under certain conditions an accurate estimation can be made of the opsonic content of the blood. This phagocytic count is compared with the phagocytic count of normal blood, taken as unity,² and so from hour to hour or from day to day the rise or fall in the protective substances in the patient's blood can be accurately determined. Although at first sight it might be supposed that the results thus obtained would be capricious, yet repeated observations made in cases of acute and chronic infections show the method to be remarkably accurate. As already observed, this protective substance or opsonin is normally present in the blood, but when a vaccine is introduced into the patient's system its effect is to cause a greatly increased elaboration of opsonins by certain cells of the body. In the case of pneumonia we have no vaccine as yet which can be administered. But one can see that an attempt at a really scientific treatment of the disease would be made if the various methods of treatment adopted were considered in conjunction with the rise or fall of the opsonic curve. If, for instance, it was found that alkaline treatment was accompanied by a rise in the opsonic curve this would indicate that benefit was being derived, and *vice versa*. In short, it might be possible by an organised series of observations to determine treatment generally applicable to the disease and also that adapted to its varieties and special phases. And it may be remarked that the clinical symptoms alone are not always a safe guide. The opsonic curve may be falling with but little change in the symptoms, for a time at least. In certain inoculations I made lately on animals I found in certain cases the opsonic value of the blood falling without any loss of body weight or other clinical symptoms to indicate it. At any rate we have here opened up the possibility of treatment based on scientific data of a very precise character. It does not include the entire treatment of the disease, more especially as to the mechanical aspects, but it covers a very wide field and may in time displace the theorising and groping which up to the present have more or less characterised the efforts of the physician.

I am, Sirs, yours faithfully,

Henrietta-street, W., Jan. 21st, 1905.

A. G. AULD.

ANKYLOSTOMUM DUODENALE.

To the Editors of THE LANCET.

SIRS,—Upon my return to Egypt I find that in a communication by Dr. Alessandrini to the Italian Zoological Society, written at the end of 1904, I am given the credit of having made independent research upon the question of the migration of the larvæ of the *ankylostomum duodenale* from

the skin to the intestine. I also hear that other authors, such as Bentley and Zinn, seem to have accorded me similar credit. I therefore ask for a few lines of your valuable space to state that my two communications on this subject were written by Professor Looss's authorisation as a means of informing English readers of his now well-known discoveries.

I am, Sirs, yours faithfully,

Cairo, Jan. 12th, 1905.

F. M. SANDWITH.

FRACTURE OF THE ANTERIOR FOSSA OF THE SKULL DIVIDING THE OPTIC NERVE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 21st Dr. F. J. Hathaway records a case of the above and it is commented upon in your annotations. Will you permit me to say that I discussed the same question in a paper before the Ophthalmological Society a few years since? I then recorded 18 cases and treated the subject somewhat fully in a paper which occupies 25 pages of the Transactions of the society for 1897. It is briefly abstracted in THE LANCET of June 26th, 1897, p. 1745. Since that time I have seen fully a dozen additional instances. Three cases a short while ago were attending my clinic at the same time and were shown at a meeting of the Sheffield Medico-Chirurgical Society. One case is at present among my out-patients at the Sheffield Royal Infirmary. I am not therefore disposed to consider the association of damage of the optic nerve with head injuries as particularly rare and, if looked for, such cases in a large clinic will not infrequently, I believe, be met with.

The medico-legal aspect of these cases is interesting and important. An individual meets with an injury to the head; there may be some loss of consciousness or not and the general symptoms pointing to severe head injury may or may not be marked but he asserts that he has thereby completely lost the sight of one eye. Examination with the ophthalmoscope only yields negative results. The lesson to learn from these cases is, I think, that one should be guarded in forming an opinion and should recognise the possibility of the patient's statement being correct. This will be corroborated, if true, after a lapse of a few weeks (three or more) by the decolouration which will be noticeable in the optic papilla. I referred to this matter in the paper I have mentioned and it has also been my habit to point out to my class for some years its importance. The absence of ophthalmoscopic evidence at the outset is doubtless due to the injury being posterior to the point of entrance of the central retinal artery into the optic nerve.

I am, Sirs, yours faithfully,

Sheffield, Jan. 23rd, 1905.

SIMEON SNELL.

HESSING'S SPLINT AND CONTRACTURE AT THE KNEE.

To the Editors of THE LANCET.

SIRS,—I should be obliged if you would grant me space wherein to correct two omissions in my recent communication. First, the instrument I made use of was Hessing's splint-case appliance as modified by Hoefftcke. One of the modifications is a very important one and consists in an arrangement at the ankle whereby continuous traction of the leg is applied during the straightening of the knee. It is this traction which prevents the straightening process from causing pain. Secondly, I omitted to mention that the mobility of the knee, which at the commencement of treatment was almost imperceptible, has very slowly but steadily increased, being now some 15 degrees; in other words a flexed, rigidly ankylosed knee has been transformed into one with fair and apparently increasing mobility.

I am, Sirs, yours faithfully,

Wimpole-street, W., Jan. 24th, 1905.

T. H. OPENSHAW.

WEST AFRICA AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you would be good enough to contradict a report attributed to me that West Africa is likely to become a health resort. The health of Europeans in many of the coast towns now shows a marked improvement and will no doubt continue to improve. This

¹ Proceedings of the Royal Society, Sept. 28th, 1904.

² In each case one volume of serum is added to one volume of corpuscles from citrated normal blood and one volume of a suspension of the organisms.