

State and Cape Colony (Queen's medal with five clasps and King's medal with two clasps). He was employed as syphilologist on the headquarter staff of India in 1905, and later became lecturer on syphilology at the Army Medical College in London. In 1907 he went on a special mission to Uganda to inquire into the ravages of syphilis there, and in the following year read his well-known paper on the treatment of syphilis by soamin at the meeting of the British Medical Association at Sheffield.

Owing to insufficient time to fully attend to his duties Sir Frederick Treves has retired from the Army Medical Advisory Board and the Nursing Board of Queen Alexandra's Imperial Military Nursing Service, on both of which he has served since their foundation 11 years ago. He has also signified his intention of resigning the chairmanship of the Executive Committee of the British Red Cross Society.

Correspondence.

"Audi alteram partem."

THE VALUE OF PNEUMOCOCCUS VACCINE IN THE TREATMENT OF PNEUMONIA.

To the Editor of THE LANCET.

SIR,—I have been interested in reading Dr. Nathan Raw's article in THE LANCET of March 9th on the above subject, which is a record of experience still much needed on the use of vaccines in pneumonia. I do not share with Dr. Nathan Raw the regret that an auto-vaccine is not always readily obtainable in early pneumonia. In the first place we may be sure in most cases of pneumonia, even in the influenzal and "typho-pneumonia" cases, that the pneumococcus is the predominant poison-organism present, shall I say the organism of first instance, in the pathology of the disease, and a good stock culture is therefore quite acceptable if required. In the second place, I am doubtful of the value of the vaccine in the first days of the disease when the resistance is overwhelmed by the toxic venom of the first onslaught. Thirdly, although it is true that a vaccine can be obtained within a few hours from exudation directly removed by puncture of the hepatised lung, yet these early punctures can only be obtained at considerable hazard, unless the consolidation has advanced to the surface of the lung with great rapidity. In the first days of really desperate cases I am inclined to think, from an experience, however, of one case only, that a serum—Paine's or Merck's—administered with bactericidal intent may be more valuable than a vaccine. At present I advise the vaccine to be held ready for use nearer the crisis, perhaps about the fourth or sixth day, in those cases in which the pneumonia still shows signs of spreading or involving separate parts of the same, or attacking the other lung. For this purpose a vaccine obtained with due care from the sputum of the first days of the disease has the advantage of securing the coöperation of any complicating organisms that may be present. The disadvantage is the very considerable expense often involved in obtaining an autogenous vaccine. An estimate of the organisms present may, however, be made without proceeding to make a vaccine from them, as a guide to the selection of a stock vaccine.

I cannot say that Dr. Nathan Raw's figures show much in favour of the value of vaccines in acute pneumonia. The mortality in his cases, which included 66 cases below the age of 20 and only 4 above that of 60, was a little over 16 per cent., whereas I take the average death-rate of pneumonia, taking all cases, to be about 17 per cent.; and excluding the intemperate, the mentally afflicted, and those over 65 the mortality is 12·5. I do think, however, that vaccines are of value in some cases and at those periods of the disease which I have specified, and it is desirable for them to be in readiness for use in such cases. It is in cases in which there is a tendency for the crisis to be postponed, and in those many cases in which the crisis is followed by a lingering remittent pyrexia, not due to any purulent collection, that vaccines are of undoubted value.

There is one more point on which I should like to enter a *caveat*—viz, the initial dose of vaccine. A 15 or 20 million

dose is a more prudent one to begin with, which can be liberally advanced if necessary with close observation of pulse and temperature. I have recently seen a decided reaction with rigor and temperature rising to 105° from even so moderate a dose as 20 millions.

I am, Sir, yours faithfully,
Portland-place, W., March 11th, 1912. R. DOUGLAS POWELL.

THE NATIONAL INSURANCE ACT AND THE HOSPITALS.

To the Editor of THE LANCET.

SIR,—The position of the London hospitals in reference to the admission of patients when the medical benefits of the Insurance Act come into operation is one which is being, or will shortly be, considered by the governing bodies of the hospitals. Presumably they will desire and be entitled to ask for the opinions and advice of their medical staffs on the subject, and seeing the importance of the issues involved it is to be hoped that the members of the honorary staffs will take measures that their advice may be very carefully considered before being given and that they should endeavour to come to some agreement as to what is desirable. I trust, therefore, you will allow me to submit in your columns some of the points which at no distant date will have to be decided upon.

Although the National Insurance Act gives power to the Commissioners to give grants to hospitals, the Chancellor has stated, "It is not proposed to make provisions for institutional treatment," and for a time, at any rate, there will be no provision under the Act for any kind of treatment for persons under 16, nor for emergencies, nor for women, except a very uncertain number, nor will there be any provision for indoor institutional treatment (except for tuberculosis) for any persons whatever, and the amount and duration of "medical benefits" for "deposit contributors" will be very limited. There is, therefore, no reason why the voluntary hospitals should not continue to receive any of the persons or ailments coming under these categories. But under the Act the whole of the male working-class population over 16 years of age, whatever the amount of their earnings, and a large number of other persons, not manual workers, whatever their incomes, will be insured for treatment for such diseases and injuries as do not require *indoor* institutional treatment.

The voluntary hospitals are established and supported for the benefit of persons who are unable to pay for treatment. The insured persons will not only be able to pay, but will have already paid for, and be able to obtain elsewhere, the outdoor treatment they require, and it would be inconsistent for the voluntary hospitals to supply treatment and medicines to such persons who are not in need of them, while declaring that the effects of the Insurance Act will so reduce the support they receive from the public as to force them to close down beds to the exclusion of patients who require the treatment for which they are not insured.

Again, honorary medical officers should not be expected to give their services to persons who have no claim to gratuitous treatment and whom other doctors have received payment to attend. It may be pointed out that some of these persons will be in affluent circumstances, for though the Act empowers the Commissioners to exclude such persons from unlimited "medical benefits" they will be compelled in such cases to hand over to them the estimated money value of their medical benefits. It is therefore suggested that as soon as the medical benefits come into force hospitals should not accept for out-patient treatment persons who, by their insurance, are entitled to receive such treatment elsewhere. The proposal would not involve any departure from the principles on which the voluntary hospitals have always been conducted—viz, the restriction of their treatment to persons who are not able to afford to pay for it. It would involve that the hospitals should recognise that under the Act a large number of persons now qualified to receive outdoor treatment will under the Act cease to have such claim, being entitled to, and able to, receive the treatment they require elsewhere. No alteration in hospital regulations would be required, but only that the present regulations should be acted upon.

The Chancellor in his speech to a deputation of hospital representatives on July 25th, 1911, pointed out that this was the course the hospitals ought to adopt. He said: "The

hospitals should ask, 'Are you insured?' He says 'Yes'; he has no right to come to hospitals." Among the insured persons there will occur cases of doubt or of difficulty in which special advice may be advisable, and it is suggested that such insured persons shall be accepted as out-patients if sent by a medical man for consultative purposes. It may be pointed out that the "deposit contributors" will not be excluded by the proposal above made whenever their medical benefits under the Act lapse or expire. If the proposal here made is adopted by the hospitals, no hardship would occur. No persons would be excluded from hospital relief except from that form of treatment to which they are entitled and able to get free elsewhere. The present overcrowding of hospital out-patient rooms by a large number of comparatively trivial cases would be to the same extent relieved, greatly to the advantages of the patients with more serious ailments, and it is believed there would still be ample material and much better opportunities for clinical teaching.

A saving would be effected in the out-patients' department and the hospitals would continue to receive only persons unable to pay for the treatment they require. They would not be in the danger they are in at present of losing support from the public, who naturally demur at subscribing towards the treatment of persons for whose treatment they have already been taxed. The suggested restriction might at present be limited to males; to exclude insured females would exclude the large class of domestic servants and others, and this would require further consideration. The question as to asking or receiving subventions from Insurance Committees might also be left open, and it would not affect the present proposals.

I am, Sir, yours faithfully,

London, W., March 8th, 1912.

SIDNEY PHILLIPS.

DOES CANCER OCCUR IN VEGETABLES?

To the Editor of THE LANCET.

SIR,—In common, I doubt not, with most students of the cancerous process, I have been much interested in speculations as to whether anything of that nature can be produced in vegetable tissues. It is obvious from the beginning that definitions are absolutely necessary in order that we should understand the subject which we discuss; and I would venture boldly to define what we mean by cancerous action to be some influence which promotes, in the first place, a reproduction of tissues, which more or less resemble those natural to the part affected, and secondarily their more or less rapid death. By some such definition we can distinguish between cancer and most forms of chronic inflammation. I have recently been working upon what is called amongst gardeners and foresters the "canker" of trees, &c. It is known to be produced in different trees by different causes. Thus we have the canker in the apples known often as the American blight, canker of the larch known as the larch disease, and canker as it occurs in the oak and many other trees by no special name. In many of these special causes such as the attacks of named parasites, &c., are well recognised. I have, however, been much impressed by the features of similarity which they possess to one another and to cancer, as it occurs in animal tissues.

My object in addressing this letter to you is not, however, to record any new observations of my own, but to ask the attention of your readers to some remarkable and very valuable contributions to our knowledge which have recently been recorded in America under the name of "The Crown-Gall of Plants: its Cause and Remedy."¹ I have read no paper recently which has caused me to regret more definitely that the New Sydenham Society has ceased its labours, for it is one which ought to be promptly reprinted. If I were to record all my own conclusions I should have to mention as mere guesses much that has now been anticipated and established on carefully collected evidence in this "Bulletin." I must not trespass on your pages with any attempt to summarise its conclusions, but must recommend your readers to procure it and to study

it carefully. I had come to the conclusion that between canker in vegetables and cancer in animal tissues there was no really fundamental distinction. The paper to which I refer traces what we know as canker to a polymorphic bacterium, the *B. tumefaciens*. I regret that the condition has received the misleading, or at any rate not instructive, name of Crown-Gall. The growths to which it refers are very common, and abundant opportunities for investigating them will be afforded to us all during the advancing spring. I may probably be able before long to record some facts in detail respecting them, and make some criticisms, and they have no doubt already attracted the attention of some of our British botanists.—I am, Sir, yours faithfully,

Haslemere, Surrey, March 9th, 1912. JONATHAN HUTCHINSON.

THE INTESTINAL FLORA.

To the Editor of THE LANCET.

SIR,—I was much interested by Dr. Distaso's article on the Intestinal Flora, and not less interested in Dr. Edwin Goodall's criticism.¹ My observations in regard to the bacteriology of the intestinal contents have been chiefly concerned with the conditions found in infants and children. At the Infants Hospital, where some 50 babies are constantly under treatment, a bacteriological examination of the intestinal dejecta is made in every case, and in many cases repeated examinations are made. It appears to me that among infants and children there can be no doubt as to the profound pathological influence exercised in certain circumstances by that group of organisms generally known as the colon group. We have gradually arrived at methods of bacteriological diagnosis which permit of the conditions being precisely appreciated and appropriately treated. In cases of "colon toxæmia" pure cultures which have a powerful influence in rendering the intestinal conditions inimical to the growth or action of the colon organisms are systematically administered. The power of the cultures and their beneficial influence have been demonstrated on many occasions, notably in cases where relapses have followed the suspension of the cultures, while rapid improvement has ensued as a result of their renewed administration. At the present time more than one-half of the infants in the hospital are being treated by pure cultures, the nature and dose of the culture varying according to the organisms attacking the infant and their degree of virulence. In all cases of "enteritis" and allied conditions the importance of arriving at a bacteriological diagnosis is, in my opinion, paramount. I may cite two cases out of many in illustration.

I saw a child, aged 6 years, suffering from acute colitis, at Taunton in consultation with Dr. L. H. C. Birkbeck. The whole of the colon was acutely tender; there was marked hæmorrhage from the large intestine, the blood being bright red and mingled with mucus. The condition was found to be due to the bacillus enteritidis sporogenes. A pure culture of the streptococcus lacticus in an extremely active condition was prepared (the particular strain of this organism employed being the one known in the Infants Hospital Research Laboratory as "No. 52"). Within three days of the first administration all the acute symptoms had ceased, and in a week the child was convalescent. He made a rapid and uninterrupted recovery.

A child, aged 12 months, suffering from severe intestinal toxæmia, was seen by me at Westgate-on-Sea in consultation with Dr. Heaton. The child could not take milk in any form without the gravest intestinal disturbance, and his condition had given rise to much anxiety. In this instance we had to deal with a virulent colon bacillus. The power of the organism was such that it curdled milk (at 38° C.) in five hours with the production of much gas, while in other respects it gave marked evidence of its virulence. To effectively combat the powerful organisms attacking the infant a culture containing several organisms was prepared. This case required careful watching owing to the power of the antagonistic cultures and the necessity of avoiding a too sudden or too great revolution in the intestinal conditions. The result was most satisfactory. The child made a rapid and striking recovery; it was out of danger in a week, and in another week was well able to digest a fairly rich milk mixture.

In both these cases I am satisfied that but for the bacteriological diagnosis and consequent treatment the patients

¹ The Crown-Gall of Plants: its Cause and Remedy. By E. F. Smith, N. A. Brown, and C. O. Townsend. Washington: Government Printing Office. 1911. A reference may also be made to a most interesting paper on Bacterial Diseases of Plants communicated by Professor M. C. Potter, Sc.D., M.A., to the Journal of Agricultural Science, January, 1912. Mr. Potter quotes freely from Dr. Smith's paper, but contributes valuable material of his own.

¹ THE LANCET, Feb. 24th, 1912, p. 496; March 9th, p. 684.