

the teeth out, and that the children were to have a raw apple each night before they went to bed, but nothing was said about a toothbrush."

It is not my intention to attempt to defend all that may be said as to how dental diseases may be prevented, and although no doubt the eating of an apple before going to bed might do the teeth no harm, for other reasons I certainly would not defend the procedure. At the same time, I am in most hearty agreement with the statement that every meal should end with raw fruit or food of a detergent nature so that the mouth will be physiologically clean at the end of the meal. To say that the advocacy of ending a meal with raw fruit in order to clean the teeth was a most absurd instruction seems to overlook a principle of dietetics of first-rate importance now recognised by many medical men in highly responsible positions—namely, that a meal should terminate in such a way that the mouth and teeth will be left physiologically clean. Indeed, on June 1st, 1912, in an article on Dietary Reform in Secondary Schools, THE LANCET said that "everyone will agree with the recommendation of raw fruit as a termination for a meal." To scout this principle leads not only to the destruction of the teeth from caries but also to "oral sepsis" and all its attendant consequences. To indicate that this principle can be flouted and that the evils resulting from ending a meal with non-detergent or unhygienic foods can be rectified by the use of a toothbrush is reverting to a system of preventing dental diseases which has been found in the past to be most unreliable and relatively inefficacious.—I am, Sir, yours faithfully,

Harley-street, W., June 2nd, 1914.

J. SIM WALLACE.

"THE MENACE OF CANCER."

To the Editor of THE LANCET.

SIR,—The question, Is cancer on the increase? is no doubt extremely difficult to answer in the affirmative if accurate and reliable statistics on the subject be demanded as a necessary basis for the reply. Where such reliable statistics do not exist—which is, I imagine, the condition in most countries at the present time—it may be necessary for a community to make up its mind on the subject without them, aided by such figures as may be available and the general knowledge of the community. On account of the serious nature of the disease it would seem important for all communities to satisfy themselves on the point and to realise, as one of your correspondents puts it, "the seriousness of the cancer problem, the frequency of cancer occurrence," and the necessity "of arousing a public interest in the necessity of educating the public in the plain facts of cancer as a pre-requisite for a nation-wide campaign for cancer control"; and should an increase of the disease be evident, as Mr. Hoffman compels one to believe is the case in America,¹ it is of equal or greater importance to know the reason why. To judge from recent literature on the subject, Britain does not seem to be in any better case—e.g., the medical officer of health of Edinburgh in his annual report last year called pointed attention to the increase of this disease, the mortality from which has been for years almost the same as that from phthisis. An interesting letter appeared in the *British Medical Journal* of Feb. 14th last, p. 368, from "F. H.," with diagram, relating the occurrence

of 17 cases of cancer along a four-mile stretch of road within the period of five years. Nor is this increase of cancer confined to Britain and America. South Africa is in an equally unfortunate condition. Speaking from personal experience during the last 29 years (for statistics we have none) at the beginning of that period cancer was decidedly a rare disease; it has increased in the white population gradually and continuously during these years, and to-day it is comparatively a common disease, so much so indeed that it is attracting public attention.

When a common condition is so widely spread there is probably a common cause. In the Physiological Section, British Association, 1913, Dr. F. C. Shrubbsall, speaking on the relative fertility and morbidity of defective stocks, having studied 700 families, is credited with stating that consumption was extremely common among degenerate stocks, that insanity was infinitely more frequent in defective stocks, and that cancer was more frequent and infantile mortality ten times greater in defective than in normal stocks, a degenerate condition unquestionably showing a greater susceptibility to disease. It is, I think, generally accepted to-day that syphilis is the great agent by which degeneration of stocks is accomplished. Thirty odd years ago some of the older surgeons believed in a close relationship between syphilis and cancer: as I have heard it expressed by one of them, "people acquire syphilis late in life and die of cancer." This belief seems to have been "on the shelf" for a good many years, but is again finding expression in a cautious manner—e.g., Mr. D'Arcy Power, in his evidence before the Royal Commission on Venereal Diseases, at its twenty-second meeting, is reported as stating that "the expectation of life was materially shortened for a person who had been infected with syphilis; the immediate danger extended to the second generation, and the vitality of the stock seemed diminished for several generations. It predisposed," Mr. Power thought, "to cancer and tubercle."²

In South Africa there seems little doubt that cancer favours syphilitics, and that the two diseases have increased side by side. The same is true of tuberculosis, the preference of which for syphilitics has been specially pointed out in papers by me in THE LANCET of May 11th, 1912 ("Report on an Enquiry into the Prevalence of Syphilis in the South African Native and its Influence in Aiding the Spread of Tuberculosis"), and of April 11th, 1914 ("The Mortality on the Rand: Some of its Causes"). South Africa has its full quota of physical and mental degenerates, the responsibility for the mass of which must be attributed to venereal diseases. In addition to these we have another disease which also seems to be dependent for its spread on the presence of a syphilitic foundation—viz., leprosy. Nor is this surprising in view of the close affinity of the organisms of leprosy and tuberculosis. So close that one asks, Are they distinct organisms or variations of the same organism? Possibly the development of Mme. Victor Henri's work may throw some light on this important matter in the near future. In 25 years the number of lepers in Basutoland has increased from 300 to 800. In Natal, along the Basutoland frontier, the increase of cases has been so great that the attention of the

¹ THE LANCET, April 11th, 1914, p. 1079.

² THE LANCET, March 21st, 1914, p. 846.

Government was called to it in the Union Parliament during the present session. In Europe the increase is also marked. In Paris, it is stated, the number of lepers has increased in a few years from 50 to 300. This is also true of Russia. India shows a like tendency, the increase being placed at 10 per cent. for ten years.

In consideration of these facts it would seem that, while not neglecting these various diseases, there may be a better way of directing a nationwide campaign than against cancer, as suggested by Mr. Hoffman—viz., towards the elimination of venereal diseases. With its success one might venture to hope for the disappearance of most of the others to a very marked extent. The only army with which any hope lies of carrying such a campaign to a successful issue requires to be composed of the *children of the nation* who have received a common-sense education in those subjects which concern so nearly their own and the nation's welfare. "The foundation of every nation is the education of its youth."

I am, Sir, yours faithfully,

BENJAMIN G. BROCK.

Germiston, South Africa, April 30th, 1914.

THE CHEMICAL TREATMENT OF CANCER.

To the Editor of THE LANCET.

SIR,—The treatment of inoperable cancer by chemical agents is, in fact, that of the disease itself. If growths of long standing can be safely removed by their use greater success will be obtained when more recent growths are attacked. The basis of such treatment rests upon the fact that the bodily resistance to disease can be increased artificially by the exhibition of such chemical substances as the cinnamate of sodium and the orthocoumarate of sodium, and that an element destructive to the life of cancer cells can be introduced without involving the destruction of healthy cells. The introduction of colloidal copper has placed in my hands the coping-stone for which I have been seeking since 1908.¹ In 1912 D. T. Gaube du Gers published a paper in Paris, "De la Décancérisation," in which he published some cases treated with a colloidal copper solution, and I recognised the fact that the coping-stone for which I had been assiduously looking had been found. The successive steps taken have been published in THE LANCET,² and I claim that they have been taken in an orderly manner, and based upon a sufficient working hypothesis. Dr. Morgan, since 1908, has made various metallic organic compounds such as the coumarate of copper, but none of them have been found to be of practical therapeutic use owing to insolubility or other reasons. Dr. Martindale, of New Cavendish-street, has now made a solution which he is sending out in sterile form and which contains copper in the form of a protalbuminate or lysalbuminate, and he confidently asserts that the copper content is in a colloidal state and chemically very labile and reactive. From the therapeutic aspect there is no doubt that the solution is active, that it is well tolerated, and gives rise to no unpleasant reactions in patients.

I have administered 5 c.c. of this solution subcutaneously twice weekly to a patient suffering from

advanced carcinoma of the liver, and Mr. C. B. Lockwood, who has seen the patient, thinks that there is extensive intestinal involvement in addition. On April 1st this woman, aged 64, was very deeply jaundiced, there was no bile in the motions, and the urine was the colour of mahogany. Vomiting and diarrhoea were incessant. After a fortnight's treatment there was definite improvement in the general condition of the patient, the large masses of growth had much diminished, and the vomiting had disappeared. After eight weeks' treatment the improvement was very marked, vomiting and diarrhoea were absent, the urine was less discoloured, and there was less pigmentation of the skin.

It appears, therefore, that the treatment of cancer can be successfully undertaken with the aid of chemical substances, and it is for this I have contended for many years past. During the last four or five years certainty existed in my mind that my chemical friends, Dr. Morgan and Dr. Martindale, would sooner or later provide me with the copper compound for which I was seeking, and when the latter sent me the colloidal copper solution I recognised the fact that success was secured. So much success had already been obtained with the aid of coumaric acid compounds aided by oleate of copper in the cases where the latter could be applied locally, that the only doubt remaining was as to the toleration of copper in the colloidal form by the patient in doses which would be sufficient for the attack upon large masses. This doubt has now been removed, and it can be asserted that there is no danger to the patient when colloidal copper is exhibited in the dose contained in 5 c.c. of Dr. Martindale's solution.

In conclusion, may I express the hope that no more will be spent upon the exploitation of radium as a cure for this disease? Its use has not been unaccompanied with grave disasters, and, if the truth is told, its therapeutic possibilities are limited to the treatment of easily accessible growths, and always will be. Growths situated even a comparatively short distance from the spot exposed to the rays must be uninfluenced by their action.—I am, Sir, yours faithfully,

June 1st, 1914.

LOVELL DRAGE, M.D. Oxon.

TOUCHING FOR THE KING'S EVIL.

To the Editor of THE LANCET.

SIR,—In the last part of the Proceedings of the Section of the History of Medicine, Royal Society of Medicine (p. 234), Dr. Raymond Crawford added a note referring to the supposed bronze touch-piece of Charles I., for the first public announcement of which he thought we were indebted to Mr. Henry Symonds. I have looked up Dr. Crawford's reference to Mr. Symonds's announcement (*Numismatic Chronicle*, London, fourth series, 1910, vol. x., p. 395), and find that amongst "the accounts of the wardens of the exchange and moneys within the Tower" (1625–1649) Mr. Symonds specially noted an entry (1635–1636) recording the allowance of a payment to the chief graver "for making tokens used for the healing of the king's evil and delivered to William Clowes, sergeant chirurgion, at 2d. the piece; the number being 5500." Mr. Symonds proceeds: "This is an interesting discovery, proving, as it does, that Charles used a touch-piece of base metal when the gold angels had become too valuable to be distributed at such ceremonies." I do

¹ THE LANCET, Nov. 7th, 1908.

THE LANCET, July 12th, 1902, and Sept. 7th, 1907.